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ORGAN OF THE INDIAN ECONOMIC ASSOCIATION

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JULY, 1933

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PART I

FUTURE OF WORLD AND NATIONAL ECONOMIES

BY

PROF. V. G. KALE.

Experience of the past few years shows clearly unmistakable signs of a strong reaction in the spheres of internal national policies and international relations against Liberalism and extreme forms of Socialism and likewise of a drift towards economic nationalism on all hands and a deliberate jerk in that direction in certain instances. There is, indeed, no doubt that nations still feel the indispensable need of concerted action to attain the common purpose of finding means to lift the world from the cataclysmic depression into which it has been thrown. The very meeting of the World Economic Conference in London is sufficient proof of this. The reports of the proceedings of the committees of the Conference received from day to day, however, indicate what a wide gulf is fixed between the undisputed general desire to come to an agreement on the common action to be taken and the conflicting viewpoints

.

adopted by different nations as to the specific measures designed to reach the objective. Divergence of opinion is, of course, to be expected when representatives of the nations of the world meet to thresh out problems of world-economy and to fix their contribution to the output of joint decisions. Questions like those of the gold standard, the fixing of the exchange ratios, the future of silver and tariff policies are certainly bound to be viewed differently by different nations, and understandings and compromises on them become inevitable. But a careful observer will not fail to notice that there is much more here than appears on the surface and to the first view. The London Conference did not meet, it should be borne in mind, to discuss one or two specific issues, though certain countries may be particularly interested in securing an international agreement on a question here and a question there. For instance, a rise in the level of prices is desired by all, and so is stabilisation of exchanges; and yet the methods of achieving the ends may be differently emphasised by different nations. But the real problem before the Conference was, in effect, the rehabilitation of world-economy and the readjustment of international relations, though it might not appear in this light even to those participating in its deliberations. That the total breakdown of the Conference should have become possible, even in its initial stages, cannot but point to something fundamental in the make-up of world-economy having been touched in the course of negotiations on apparently minor issues.

There is a feeling in certain quarters that economic nationalism is the worst and probably the only real stumbling block in the path of world recovery, and that all that is needed to put an end to unemployment and to rest re industrial and trade prosperity is a return to the pre-War conditions of international economic relations, particularly in the matter of tariffs, movements of gold and capital, and the unrestricted exchange of commodities. It is forgotten, in this connection, that the very structure of world-economy has been radically altered and the old international economic rela-

tions have been fundamentally changed as a result of the Great War and of the territorial, political, and economic arrangements effected by the Treaty of Versailles. The London Conference was precluded from discussing large issues like German reparations and inter-allied debts, and was restricted to the deliberation of what are, after all, temporary devices and superficial remedies. This may probably be justified on the ground of the delicate political relations of nations towards one another. But even the committee of experts which drew up the annotated agenda of the World Conference had to utter a warning against optimistic expectations unless certain conditions were fulfilled. In respect of the extensive programme it had drawn up the Committee stated:—"We would not give the impression that the adoption of this programme could deliver the world at a stroke from the difficulties under which it is now labouring. But if the Governments are prepared to undertake it, and also to settle political questions which lie outside the scope of the Conference, we believe that confidence and prosperity can be restored." Unfortunately both theorists and politicians are blind to the new trend of thought and policy around them, and delude themselves with the brief that somehow or other the pre-War economic equilibrium, national and international, may be restored if the panacea of unrestricted trade were adopted. As a matter of fact, the pre-War world-economy is incapable of revival in its old familiar form, and nations have to recognise that they can only make the most of the altered conditions and changing political and economic ideas and policies in the various nations.

Whether one likes it or not, the Liberalism of the last century, both in Politics and Economics, has lost ground almost everywhere and strong opposite currents are visible on all hands. It has been deliberately repudiated in certain countries, and Fascist organisations and dictatorships are the order of the day. This revolt from Liberalism, whatever its ultimate end may be, means severe restriction of individual freedom to carry on economic activities and the control of trade and industries by an all-power-

ful State. And it appears as if a new epoch in the history of the political and economic development of the world had opened, and that the familiar solutions of international difficulties were no longer applicable and effective. Fascism is opposed to Liberalism and Socialism both. To the former, because it reduces the State to the position of a collection of independent atoms and thus renders it weak, and to the latter, because it divides the community into two warring classes with a similar undesirable effect. It conceives the State as an organic personality which cannot be divided without disastrous results. As an opponent of Liberalism and Socialism, Fascism is likewise anti-international. It is born everywhere out of national sentiment, and it is as strong in countries defeated and conquered as in the victorious. It does not tolerate free competition, the life-breath of Liberalism, and cannot permit the class war of Socialism.¹ Would it not be futile to seek to rebuild world-economy on foundations which have been shaken by the assault of such new ideas and new policies disclosed in the political and economic movements which are taking shape before our eyes? To a nation like England, whose very existence is dependent on the free movement of goods and services between countries, there is no escape from a conception of world-economy in which there is no place for self-sufficiency as a means or as an end of national economic policy. As Andre Siegfried points out in his work on "The English Crisis,"^{1a} whatever changes may be effected in British economic policy, it must continue to be essentially based on three indispensable principles, viz.,—free intercourse and exchange of goods, control over the raw materials of the world, and the system of international financing. A close study of the developments which have taken place in England during the past few years leads the author to the conclusion that the attitude of that nation

¹ See *Internationaler Faschismus*—Verlag: G. Braun Karlsruhe.

^{1a} *Die Englische Krise*.

must ever remain international, and that a radical departure from it is unthinkable. He believes that England, as a leading European Power, attached to the Continent, is an idle dream, and still England as a closed Empire is a Utopia. According to him the vitality and the pliancy which characterise the British people will save them from the ruin which a radical change over to a new policy is sure to bring on them.

The attachment of England to the pre-War system of world economy is perfectly intelligible, and that nation's capacity for adjustment to changed conditions is well recognised. But the faith in the "naturalness" and eternity of that economy, which was so virile and common in years past, no longer holds. The bitterness of feeling evoked by the misery which has been the sad lot of nations during the post-War period is reflected in the resolute refusal of many thinkers in them to believe that the world can be restored to pre-War economic conditions, internal and international. For instance, Edgar Salin² says:—"Free trade, free flow of capital, and the gold standard were the lines and the principles along and according to which England ruled over its empire and the world. As the War shook the leadership of England the possibility of that nation exercising world control in accordance with the business morals of a gentleman trader is gone by; and, with it, has passed away the possibility of the extension of the life of the old system of world-economy. Because this world-economy was English. Among its essential elements was the Pax Britannica, the faith in the imperturbability of the English monetary standard and the confidence in the English trade morality." But what is to take the place of the world-economy of the old style? The future is not for Individualism, Liberalism or Socialism; but it is for national states in which economic activities occupy their proper place, namely, of subordination and service to the national community. National states will attempt to make their people

² Edgar Salin : *Wirtschaft und Staat*.

self-sufficient as far as possible, and will come to some sort of agreement among themselves as regards matters in which contracts and concerted action may appear to be necessary. The old style world-economy was founded on the relations of businessmen and their groups, left to carry on economic activities for their own profit, irrespective of the consideration of their effects on other members and sections of the community to which they were politically subject. This was found to be detrimental to the best interests of large sections of communities and of nations taken as political communities, and the experience of post-War years has emphasised the disadvantages of the old system; hence the powerful reaction against the individualism and the internationalism of the Liberal and Socialistic schools and the growth of the organic conception of the national state, co-ordinating, regulating, and controlling economic activities of individuals and social groups.

It may be recalled that List and the Historical School of Political Economy led a revolt against the individualism, the cosmopolitanism, and the abstract method of thinking of the Liberal school, with appreciable effect upon the development of national policies and of economic science. It appears as if we are witnessing a similar phenomenon at the present moment when a wave of political and economic nationalism is passing over the world. The two dissident schools mentioned above, it has been said against them, supplied a new background and a new outlook and suggested a new method, but made no solid contribution to the growth of economic thought, the latter school in particular. The "Universalist" school, led by Professor Othmar Spann³ of Vienna, is attempting to make good this deficiency, and the Fascist theorists of Italy, and the Nationalist-Socialist school of Germany are now taking up that work. These have been working out a social and political philosophy and formulating principles on which states

³ See *Ständisches Leben*, a monthly journal devoted to the teachings of the school.

and communities should be reconstructed and the mutual relations of individuals and of these to the national state should be determined. National states, internally organised for self-sufficiency and self-defence, are to form suitable groups and to constitute the world-economy of the future blocks of states such as Great Britain, France, Central Europe (including Germany and Italy), Russia, Japan, the United States of America and South America. In peace these blocks of states will exchange surplus manufactures and raw materials with one another and in war will be ranged as allies or enemies. According to some thinkers, e.g., Othmar Spann, the ideal world-economy will consist of national states, having towards one another organic relations just like those subsisting between members of a national state. The National Socialists, who have recently won a political triumph in Germany, are opposed to Liberalism on account of the latter's atomic conception of the individual and to Socialism for its disallowance of the right to private property. They complain that in the hands of the Liberal school Economics has become the science of private or individual economy and world-economy; and a study and exposition of "national economy" has been neglected, and even repudiated. "The idea of national economy as applying to an economic organism as an independent and fundamental community is impossible for Liberalism to conceive because, according to its view, a nation or a people is an accidental collection of individuals and by no means a basic organism of human beings that carries on the development of humanity." Attempts are, therefore, being made to define wealth and value in accordance with the new conception of nationality and the national state.⁴

We have discussed at length, prevailing scientific ideas about world-economy elsewhere.⁵ If by world-economy we understand

⁴ Dietrich Klagges : *Reichtum und soziale Gerechtigkeit*.

⁵ *Problems of World Economy*.

“a community of the people of the world whose mutual economic transactions are promoted by highly-developed means of communications and transport and by international agreements effected by states” then that form of economy must continue to exist even under the influence of the new political and economic philosophy unless each nation shuts itself off from others completely so as to have no intercourse with them which is impossible. What will happen then is that there will be a quantitative and a qualitative change in the economic transactions between nations. The volume of international trade will shrink, and the standard of living of the classes composing different communities and of nations, taken as units, will be materially modified. The one-sided development of nations brought about by the pursuit of Liberal policies on the principle of the so-called division of labour will be checked and internal trade, agriculture, and small-scale indigenous industries will be encouraged. As a result, a new equilibrium of international relations will be established. States will interest themselves more and more in the direction and control of national economies for the defence of their national cultures and well-being as well as of political independence; and the hope that the greatest good of the greatest number was to be achieved by individuals being left free to pursue their private ends will be sorely disappointed. The new alignment of world-economy is largely due to political causes whose influence on economic developments was severely ignored by Liberal economic theorists, and its future will be largely determined by the same forces which have received accession of strength from the experience of post-War years. Will the fresh outburst of narrow and aggressive nationalism further confound the confusion into which the world has been already thrown by the War and its aftermath is, however, the question which is troubling the mind of most people. The pre-War Liberal political and economic order, it must be noted, did not prevent the most disastrous world calamity history has known, and now desperation and the mischievous desire to benefit by confusion may drive people to any mad

act. The political atmosphere in Europe, in spite of the disarmament and the World Economic Conference, is far from reassuring in this connection. A Memorandum submitted by the German delegation to the latter Conference at an early stage of its deliberations, but promptly withdrawn, contained statements which are extremely significant. The Memorandum gives expression to the Nazi economic faith thus:—"World business consists in the intercourse of independent neighbouring national economic units. Each national unit must naturally, first of all, restore its own order. Whoever thinks that single national units can only be cured by international means sees things upside down. The network of international finance constitutes the main cause of the breakdown of markets." The Nazis, however, want to go much further than achieve national unity and welfare. Their ambition is not only national but racial, and seeks the leadership of Central and Western Europe. They say:—"Prices, goods, credit, business, etc., are all secondary concepts compared with the free creative humanity of the Western peoples which they have inherited from their fathers. We are combating for this concept; if we go under, the other Western people will go under with us or after us." This is the language of racial aggrandisement and not of economic nationalism. Due recognition of internal organic relationships of economic units governed by states is one thing, and justifying racial domination and conquest is another. The world has already suffered sufficiently from individualistic capitalist imperialism and the reaction against it cannot be allowed to have the same results, only in another way.

Such aberrations apart—and no one will be deceived with regard to them—national consciousness and the feeling of national solidarity appear to be the spirit of the age; and close observers cannot fail to see that even nations like England, strongly and instinctively imbued with Liberalism in economic as well as political matters, have been deeply affected by it. Will the resultant shrinkage of world-economy mean diminution of the well-being of

humanity, or will it mean its better distribution? Economists have to take note of the new trend of thought and development and to interpret them.

POPULATION PRESSURE AND THE MIGRATION PROBLEM IN ASIA

BY

DR. RADHA KAMAL MUKERJEE, M.A., PH.D.,

Lucknow University

Siberia, outlet for Russia's Surplus Population.

It is not generally realised that in India and south-east of a line running from Calcutta to Harbin in Manchuria live half the people of the entire earth. Asia west of the Indus and immense Siberia are relatively empty lands with scarcely 50 million people. In population Siberia but slightly exceeds one person per square mile. It extends across Asia in approximately the same latitude as Canada. It is estimated that it contains about 500,000 square miles of fertile black soil which is well adapted to cereal production. The principal agricultural region lies between parallels 55° and 57°. This belt is over 100 miles in width from north to south and has an extent from east to west of more than a thousand miles. The soil is a fertile black loam. Of this vast area only about 3 per cent is at present being farmed. But overcrowded countries in Asia do not find here an outlet. For immigration from European Russia has been going on rapidly in recent years, so rapidly that 759,000 people settled in this part of Siberia in a single year (1908). After that year, Russian immigration was greatly restricted owing to the exhaustion of fit land, although the

Russian population expanded¹ at the rate of 22·7 per 100. Farther eastward development has not been so rapid as in the west. The climate is extreme throughout the vast region. On the north stretches the Tundra where the soil below the surface is always frozen and no crops can be grown. South of the Tundra region extends from European Russia to the shores of the Pacific, the Taiga, where impassable thickets alternate with mud swamps and lakes. In winter the region is a desolation while in summer the mosquitoes are a plague. Roads are few, and hungry packs of wolves formerly used to lie in ambush, and attack travellers in sledges. Notwithstanding these drawbacks, the Russians have pushed their way into the interior of this tract north-eastward as far as Vladivostok, which is now the only Russian harbour on the Pacific. Russian steamers ply on the rivers Ob, Yenisei and Lena and on Lake Baikal. The tributaries of the rivers are joined also by canals, while the Trans-Siberian Railway, built between the years 1891—1901, affords transport facilities for the products of the entire region, such as wheat, rye, oats and potatoes, eggs and butter, furs and minerals, substantial additions to the wealth of Russia. The railway, moreover, has been a great aid towards migration and settlement on a large scale of Russian peasant colonists, who are now penetrating as far eastward as the borders of Manchuria. South-eastwards the Russians have advanced along the northern slopes of the central highlands into the Kirghiz steppes, and the Trans-Caspian Railway from Orenburg to Andijan and its westward expansion to Krasnovodsk has been the chief means of exploitation of the resources of the grass lands. Both in the north-east and south-east the overflow populations of Russia are faced by the boundaries of the densely populated countries of China and India. Not merely in Manchuria and Korea, but also

¹ Konlisher: "Some Aspects of the Population Problem," Proceedings of World Population Conference, 1927.

along the entire Chinese frontier, Russian expansion received a set back after the Russo-Japanese War.

Colonisation of Manchuria.

Manchuria, whose soil is one of the richest in the world, and whose cultivated area is more than 80 million acres, has now become the meeting ground of Chinese and Japanese colonists, to whom the Russians have been forced to give place. The Japanese residents here now number 203,000 but these are far outnumbered by the Chinese, who emigrate from the densely crowded parts of Central China by almost a million yearly. The annual influx of Chinese immigrants into Manchuria increased from 390,000 in 1923 to 1,178,254 in 1927 and over 900,000 in 1928. In the last two years 60 per cent of these immigrants on the average have remained as settlers, chiefly in Northern Manchuria.² The net immigration was computed at 2,441,868 for the seven years 1923—29. On account of the severity of conditions and diminishing opportunities the number of both emigrants and colonists is now declining. In 1929, 41 per cent only of the immigrants remained as colonists in Manchuria, and in 1930 arrivals were about 500,000 and departures 300,000.³ Like Malaya, Manchuria has become an important objective for peaceful penetration and colonisation by the Chinese. The Japanese agriculturists who number only 2,326 out of a total of 203,000 colonists have not been able to compete with the Chinese farmers in rice-growing and have also found the climatic conditions inclement. Thus an insignificant fraction of the Japanese is now engaged in agriculture, while the Chinese are settling in large numbers in the undeveloped areas especially to the north and north-east of Harbin. Of the total rice production the Japanese are responsible for only 6 per

² *Problems of the Pacific*, 1929, pp. 58, 445, 528.

³ Tawney, *Land and Labour in China*, p. 106.

cent, the Chinese for 24 per cent and the Koreans for 70 per cent. The reasons for the failure of the Japanese rural settlement are, broadly speaking, five. First, the Japanese brought up in a damp, warm country are mostly unaccustomed to the severe Manchurian climate, while the majority of the Chinese migrating from Shantung know how to adapt themselves to the environment. Secondly, the semi-tropical agriculture of the Japanese is not suited to Manchuria with its long severe winters. Thirdly, the lower standard of living and habits of thrift of the refugee Chinese colonists coming from some of the most congested parts of North China, give them an advantage, which the Japanese pioneer settlers lack. Fourthly, the long-established practice of seasonal migration and return of the Chinese established a solid tradition which has later on encouraged a permanent settlement.⁴ Fifthly, the Manchu laws of land tenure do not permit acquisition of ownership or the practical right to lease land for settlement or for any other purpose. Thus the settlers, whether Chinese or Japanese, cannot obtain any benefit from permanent improvements or from a rise of land values. Within a period of 30 years Manchuria's population has increased from 14 to 25 millions as a result chiefly of immigration. While two-thirds of the arable land of all Manchuria is now under cultivation, in North Manchuria there are vast virgin agricultural lands which are still awaiting absorption of thousands of immigrant farmers. Manchuria as an outlet for Japan's surplus population or as a foothold of Russia's political expansion has not materialised; as a great pioneer country in the neighbourhood of Shantung, which is from seven to eight times more densely populated, it has been the favourite field of colonisation of the Chinese farmers. Chinese emigration in considerable numbers began since 1905, when the legislation prohibiting emigration beyond the great wall towards the north was repealed. No doubt the peace

⁴ Own Lattimore: *Chinese Colonisation in the Geographical Review*, April 1932; B. B. Hall: *The Geography of Manchuria in the Annals (China)*, 1930.

and security of life in Manchuria, as compared with the turmoil and unrest in China proper, favoured Chinese emigration during recent decades, and for this the chief credit is to Japan, and her civil and military administration.

China's Malthusian Balance.

Evidences as to overpopulation in China have been adduced by many competent foreign observers and writers.⁵ The pressure of the population in the river plains of China has been so great that the Chinese could support themselves only by most diligent labour in agricultural and household industries. Professor Roxby has calculated that in the northern wheat- and millet-growing regions of China, about 4·7 acres, and in the rice-growing regions of the Yangtse Delta, about 1·7 acres, are necessary to support a family of 5 persons in any degree of comfort. He observes that in the case of the regions recently investigated, 33 per cent of the holdings are less than one acre in extent, and 55 per cent more than one and-a-half acres in extent. The average size of the families who have as much as one and a half acres is 5·7 while the number in the family increases with the size of the holding.⁶ According to Professor Dittmer, "there is no evidence that the population of China is increasing at all, and there is every evidence that the standard of living has struck bottom; that a Malthusian balance has been at last attained." Striking differences are, noticeable between the agricultural methods and practices of China and those of the West. First, it is estimated that in China nearly 50 per cent of the total cultivated area is twice-cropped. Secondly, crops are grown primarily for their grain, leaf or fibre products

⁵ See especially Mallory: *China: A Land of Famine and Orchard; The Pressure of Population in China*, *The American Geographical Review*, 1928.

⁶ See also Howard's article on Over-population in China, *Chinese Economic Journal*, 1929.

principally because of the absence of real animal industry. China cannot afford to use either animal or machine power. Nothing is here so cheap as human power. In some areas in China women are yoked to the plough. Of the hired and family labour on the farm, a little over one-fifth is performed by women and 6 per cent by boys. Farmers in the United States are estimated to use ten times as much power per man as the Chinese farmer has at his disposal. Thirdly, the cropping system provides also the fuel in the form of grasses and stalks, leaving little residue as organic matter for the soil. Fourthly, the Chinese have adopted, through an arranged succession of legumes and the use of night-soil, and meticulous economy of every kind of organic waste the practice of 'permanent agriculture.' Condliffe observes: "If it had not been for the 'circular farming' by which all animal and human wastes are returned to the soil, for the natural replenishment of fertility by the alluvial flood action of the rivers and for the intensity of irrigation by which water is farmed as well as land, this impoverishment would long before now have reached actual soil exhaustion." Fifthly, not merely do the Chinese carry on agriculture in incredibly tiny plots, the scale of farming being smaller than even in Japan or India, but the scatteredness and fragmentation of Chinese cultivation are seen to an extent unknown in any other country.⁷

In some districts China's dense population long ago used all the forests and often dug up the roots with frightful results in flood, draught and desiccation. China is now sustaining nearly four times as large a population as that of the United States on about one-half as large a crop-area. In the United States it has been estimated that there are about 3 acres of arable land and 9 acres of pasture and range land per person, whereas in China there is less than a half acre of arable land and probably even less pasture

⁷ Buck : *Chinese Farm Economy*; also Condliffe : *China To day, Economic*.

per person.⁸ While some agricultural districts in China exhibit very high density, 875 per square mile in Kinagsu, 600 in Chekiang, 500 in Shantung and 454 in Honan, these regions which represent the most densely-peopled parts of China in order, contribute only a small percentage of the total area. The contrast between heavy population pressure in the new valleys and sparseness of distribution in the highlands is characteristic of China. For the country as a whole the density is lower than that of Japan.

Intense Population Pressure in Japan.

The overcrowding in the latter country is far more intense, there being 354.18 persons per square mile and 1,228 per square mile of cultivated land. With the exception of the cold northern island of Hokkaido, the whole country has a population from 400 to 500 per square mile.

There is only a quarter acre of arable land per person in Japan, and practically no pasture. The ratio of crop-land to population is lower in Japan than in any other country of the world equally self-sufficing. Baker observes: "Nowhere else is agriculture so intensive and so efficient in the utilisation of land. The possibilities of production are more closely approached probably in Japan than in any other country of the world." Indeed, the pressure of population is so great that parts of China and Japan and India have reached the ultimate stage of agriculture. Here man grows, by his own labour, the food for his support, and there is small possibility for increase of food production. In Japan only 15.6 per cent of the total area is arable. This percentage is much lower than in the British Isles, which she so greatly resembles in area, in latitude and in her economic problems, though her shortage of coal and iron is a great point of difference. Although but a sixth

⁸ O. E. Baker: "The Progress of Population" in *Problems of the Pacific*, 1927.

of the land is tilled in Japan, the apparent room for pasture does not exist, because of a dense growth of bamboo grass wholly unfit for food and impossible to eradicate. The effect of the absence of pasture and of the pressure of population in limiting the production of domestic animals is most marked; and in this agriculture that supports man by an almost meatless diet, the soy-bean plays a surprising part. Here are some of the conditions that enable us to appreciate the great differences in man's relation to the land in the West and the East, in the sparse and the densely-peopled country. "The American farmer grows corn and feeds it to cattle and then eats the cattle; but one ox eats as much as five men and requires five times as much land for his support; so the numerous Orientals often omit the animal-feeding stage and grow rice and vegetables and eat them rather than feed them to animals. Great increase in population could result from⁹ the essentially vegetable diet and the omission of animal raising. The following figures represent the number of cattle per square mile and per 1000 population :

Cattle per square mile.			Cattle per 1,000 population.
British India	...	62	429
United States	...	16	653
United Kingdom	...	99	264
Germany	...	98	322
France	...	69	372
Australia	...	4	2,950
Japan	...	10	25

⁹ J. Russell Smith : *Commerce and Industry*, pp. 481-82.

Meat-eating—the Stimulus and Support of Western Energy.

The Chinese and Japanese eat meat but rarely and many not at all. Among a large section of the Indians flesh is forbidden by religion while poverty permits only a very spare consumption of meat among the Muhammadans. On the other hand, the per capita consumption of meat in Australia and Argentina is about 250lb. per year. In the United States it is about 160; United Kingdom, 120; France, 80; Italy, 45. Japan probably represents the most extreme example of a people who maintain a high civilization with few animals. With nearly 50 millions of people the Empire has of horses and cattle combined but $5\frac{1}{2}$ per cent of that number, while of sheep and hogs the number is but $\frac{1}{4}$ of 1 per cent of the human population. Both these figures are utterly insignificant in comparison to those for the United States (113 and 130 per cent, respectively), or even to those of Europe. The number of cattle in Japan per 1,000 population is only 25, i.e., less than $\frac{1}{4}$ of the number in British India.

Meat diet is unsuitable for the East. In the West the cheap meat supply is due to industrial discovery and commercial expansion by means of farm and factory machinery, railways, steamboats and refrigeration and is adapted to the demands for preserving the necessary heat by a high level of proteid consumption. This has reacted also on the conditions of labour in the West, where the metabolic changes necessitate intense and intermittent spurts of energy. Thus the meat diet is associated with those physiological conditions which have brought farm, factory and transport labour to its highest efficiency in the West.

Rice: the Staple Diet of the East.

Thus the abundant food supply of the land of summer rain, while it has encouraged the growth of dense populations for thousands of years, has neither permitted the meat diet nor an

extensive cultivation. Intensive agriculture carried on by stupendous works and domestic industries and handicrafts requiring great labour, support the dense population, while the low level of proteid consumption is adapted to steady, patient toil, with leisurely disengagement at intervals. Throughout the East rice furnishes almost the entire nourishment along with peas and beans which are widely grown by almost all Eastern peoples who raise rice. For hundreds of millions of Orientals these are the substitute for meat, milk and cheese of the West, while the starch of rice is the substitute for bread, potatoes, and many puddings as well. The unpolished rice eaten by the Oriental is much more nutritious than the shiny, white grains which the people of the West insist on eating. We have here some of the conditions which enable us to account for the difference in the standard of consumption and nutrition, in the relative proportions between proteid and starch in national diet, in economic organisation, and in modes of labour between the West and the East.

Intensive Use of Land in China and Japan.

The following description of the working of the farms in the densely-peopled province of Shantung shows us the high degree of utilisation of resources. "Every drop of vegetable matter and excrement is saved and returned to the fields, which yield a harvest of wheat or barley in June, and then, with the aid of midsummer monsoon rains, a second crop of millet, corn, sweet potatoes, peanuts and soy-beans." The last two are nitrogenous meat substitutes and help to explain the observers' statements that one of the farmers in this province with whom he talked had a family of twelve people which he was maintaining on $2\frac{1}{2}$ acres of good farmland, keeping besides one milch cow (also used as a draught animal), one donkey and two pigs. The crops raised were wheat or barley, millet, soy-beans and sweet potatoes. This is at the astonishing rate of 3,072 persons per square mile, and also on the

same square mile 256 cows, 256 donkeys, and 512 pigs. It would be impossible to find an American square mile that could feed, under American methods, the animals alone.¹⁰ The best example however of an industrious and frugal country is Japan, with scant industrial resources, a more limited area of arable land than any other great nation, and a population of 2,500 per square mile of tilled land, nearly four persons per acre. The contrast becomes striking when Japan having to feed 156·4 persons to the square kilometre, is compared with its neighbour, the United States, which, with its vast plains and abundant resources, has only 13·5 persons to the square kilometre. The State of California alone is much larger than Japan Proper.¹¹

Japan near the Limit of Cultivation.

It has been estimated that, since 1880, there has been an increase of 93·6 per cent in the total production of rice, three-fourths of which has been due to a higher yield per acre and only one-quarter to an increase in area under cultivation. In fact, reclamation in the rugged mountainous country has been delayed so far simply because the Japanese, who are accustomed to methods of high intensive farming could not adapt themselves to the extensive culture. The yield of rice for the five years 1921—1925 averaged 2350 lb. per acre. In the United States it was 1,076 lb., and in Java, another land of intensive cultivation, it was 927lb.¹² There is obviously a limit to the increase of yield from intensive farming undertaken without the aid of machinery and even of draught animals and this limit is being reached owing to the heavy increase

¹⁰ Russell Smith: *Commerce and Industry*, Chapter 35.

¹¹ I. F. Ayusawa: *The Population Problem and Industrialisation in Japan*, *International Labour Review*, October, 1927.

¹² Orchard: *The Pressure of Population in Japan*, *The Geographical Review*, July, 1928.

of population, the country showing a much higher birth rate (33.8 in 1924) since 1920 than any country in Europe with the sole exception of Bulgaria.

But there is no possibility of materially increasing either the area or the productivity of the soil. In Japan the rice-fields not only fill the valleys, but everywhere on the hillsides these are to be found terraced and artificially irrigated at an incredible cost of human labour. 56 per cent of the arable land (11,000 square miles) are in these irrigated paddy fields. As in Japan and China, many mountains in Java and Ceylon are thus terraced for rice far up their sides, such stupendous works have been constructed only for the support of very dense populations which are mainly dependent upon agriculture in which rice is the largest staple. Professor Nasu estimates that the possible margin of expansion of tillage area in Japan cannot exceed 600,000 (1,500,000 acres) under ordinary circumstances. The fact that the tillage area has been increased from 1880 to 1925 by about 18 per cent for paddy and 63 per cent for dry field, seems to show that the expansion margin has reached saturation point for Japan proper. Western nations have been overwhelmed with data regarding their population problems during recent years and ignore those of the East, but as compared with Japan, China and India, North America and the South Temperate Zone may be classed as relatively unoccupied lands.

Japan's Need of Population Outlets.

Japan's increasing population must support itself by manufacture, or emigrate or starve. It is in response to this pressing need that Japan now possesses Korea and also important concessions in Manchuria, Shantung and Siberia. Her internal possessions now comprise only about 44 per cent of her total area. In Korea there is already a dense population, and half of the total number of 470,000 Japanese immigrants live in the cities. Formosa, which

is effectively administered by the Japanese, has not served as an important outlet for emigration and now contains not more than 200,000 Japanese. Manchuria, which has already 203,000 Japanese, has vast unexploited resources, but the mass migration of the Chinese will make it difficult for the Japanese to continue their present supremacy. Japan realises that she must become like England and live by manufacturing, and import food and the raw materials of industry from other regions which would take her manufactures and her thronging emigrants, but she finds this plan blocked by the repressive legislation of America and Canada. Her overflowing population openly tries to settle in Australia and other islands, besides swarming into the Pacific seaboard of Canada and the United States, and chafes at the exclusive legislation of America as well as the "White Australia" policy, which has become a political slogan of the Commonwealth. Emigration to foreign countries has greatly declined in recent years. Only 50,000 Japanese now migrate to foreign countries annually. For the years from 1920—1922, number was exceeded by the repatriation. In 1925, the total number of emigrants was approximately 546,000, and of that number probably 45,000 were farmers, merchants, industrialists, and workers in Manchuria, in reality Japanese territory. Of the remaining 500,000, 50 per cent were in the continental United States, Hawaii (where one half of the population is Japanese) and the Philippine Islands, lands now closed to the Japanese. In 1927, the total number of Japanese emigrants was 676,263 of whom about 150,000 represented those residing in Manchuria and various parts of China. About 140,000 resided in the United States of America, 130,000 in Hawaiian Islands, and over 70,000 in Brazil and Peru.¹³ The lands bordering the Pacific, which are the most suitable for Japanese colonisation and settlement, are now chiefly controlled by the English-speaking races who have either severely restricted or completely prevented Oriental

¹³ The Japanese Empire (Year Book of Japan), 1932, pp. 31-32.

immigration. However, in South America, the Japanese emigrant still enjoys freedom and opportunities of economic advance. In Peru there are about 17,000 emigrants, of whom one half are engaged in farming in the interior. Argentina, Mexico and New Caledonia have also received Japanese emigrants but not in considerable numbers. Brazil has now the largest number of Japanese labourers, about 76,000. The Kaigai Kogyo Kaisha, the most important emigration society in Japan, handled 13,000 emigrants in 1928 or about 90 per cent of the total leaving the country. Of this number 11,169 went to Brazil. In 1929 the number of Japanese emigrants to Brazil increased to 16,648. The Kaigai Kogyo Kaisha owns a plantation of 164,350 acres at Sao Paulo and has planned to send there also 1,600 Japanese families. From 1925 on the Japanese Government has yearly set aside a large sum of money to assist suitable emigrants. The subvention is used for defraying the cost of their passage and subsidising the Oversea Enterprise Company, which collects no fees for services rendered to emigrants. Such methods have contributed in no small measure to increase the number of Japanese emigrants, especially to Brazil.¹⁴ Baffled in their legitimate demands for expansion in Australia, Canada, the United States, the Philippine and Hawaii islands, the Japanese Government is now assisting the emigration of propertied classes to a territory which so far has welcomed them with open arms. The feeling that a virile and progressive nation is being bottled up in a small territory with inadequate food resources and raw materials of manufactures is universal among the Japanese economists and statesmen, who all emphasise the social significance of the freedom of migration. Thus migration may be a temporary mitigation of over-population but its psychological effect, it is urged, would undoubtedly be tremendous. Recently, Professor Siroshi Nasur, pleading the case for Japanese

¹⁴ Seishi Idel, Japan's Migration Problem, *International Labour Review*, December 1930.

emigration, observes: "Freedom of migration for Japan where there are now some artificial restrictions would not mean overflooding of those territories by Japanese, but would simply mean giving some of them a fair chance to try their abilities. After all, there can be no satisfactory excuse for monopolizing the world's resources by a small number of people, giving no fair chance to others, while the occupants themselves have no urgent necessity or prospect of exploiting them. This attitude is harmful to the peaceful evolution of the world, and therefore its revision is very much desired."¹⁵

India's Record Figures of Rural Density.

In many provinces in India, the density of population is even higher than the average density in China and Japan, and very much higher than in the Western countries. Bengal, though somewhat smaller than Great Britain, contains nearly a million inhabitants more than the whole of the British Isles. It is the smallest of the main provinces but its population exceeds that of all. It contains on the average 616 persons to the square mile, or many more than any European country excepting England and Belgium. Its density is far greater than that of any other province. Certain areas in Eastern Bengal have a density of 3,000 persons per square mile, i.e., more than seven times the rural density which can be supported in Western Europe. Indeed, these represent some of the world's highest records of rural aggregation. These high densities are supported by multiple cropping, in which the wet variety of rice (*aman*) and jute play an important role, as well as by orchards and gardens of betel-nut, cocoanut, etc., which grow luxuriantly where the land is comparatively new.¹⁶ The population

¹⁵ Population (Harris Foundation Lectures) by Gini, Nasu and others, p. 201.

¹⁶ Mukerjee: The Concentration of Population in Eastern Bengal, *Indian Journal of Economics*, 1929.

of Eastern Bengal is still increasing rapidly, while its standard of living has not been lowered. The agricultural conditions of the new delta, however, are exceptional. Here an abundant and regular rainfall and the sequence of floods can maintain heavy and incessant cropping without risk of soil exhaustion. In most parts of India, however, the heavy burden of population on the soil has led to a low standard of living and vitality.

The population of India exceeds that of Europe without Russia, and is considerably more than three times that of the United States; the United Provinces and associated states have as many inhabitants as the British Isles; Bengal and its associated states the same; Bihar and Orissa as many as France; Bombay as Austria; and the Punjab as Spain and Portugal combined. For more than twenty centuries the Gangetic Plain has teemed with a dense agricultural population. It now comprises about 125 million persons, which is more than the population of the United States.

Land Conditions in India: The Uneconomic Holding.

To the human population must be added a population of domestic grazing animals of about 500 per square mile. Excessive grazing is by far the most important of the local biotic factors determining the vegetation. Cultivation, grazing and cutting for food and fuel have profoundly modified the original vegetation. The constant interference with the normal development of the vegetation, has caused retrogression from the original climatic climax. Intensive cropping is the general rule everywhere, while the reduction of open grazing lands and inability to devote any but a mere fraction of the holding to fodder crops, have resulted in impoverishment of cattle and reduction of their numbers. In the United Provinces, Bihar and Bengal there are about 2 to 2½ acres per worker in agriculture. In Europe about 25 acres would represent the economic unit for a peasant who is not a market gardener. In India, China and Japan, two to three acres would be regarded as

an average holding. In the United States the average farm contains 148 acres. For the whole of India the total cultivated area is nearly nine-tenths of an acre per head, the area under food grains being only five-eighths of an acre per head.¹⁷ As a striking contrast there are 12 acres of land per person in the United States. A limit seems to have been reached in most parts of India in the direction of extensive farming. Thus, most of the districts of the Ganges Valley have reached more than 75 per cent of the net cultivated to cultivable area. More and more the proportion of double-cropped area, i.e., the quality of intensive farming, governs the density of population. The land is everywhere minutely subdivided. In the United Provinces as a whole it has been estimated recently that about 56 per cent of the holdings are uneconomic, i.e., below 5 acres, which are the minimum necessary for maintaining a peasant's family. In densely-populated China holdings are very small and agriculture is as intensive as in India; but even there the plots seem to be larger than in India, a family of ten or twelve (including grand-parents because of the peculiar Chinese family organisation) working 2 or 3 acres. Thirty per cent of all cultivators of the United Provinces are living below the economic level, and cannot even in the best of years make ends meet. Another 52 per cent are living at or just above the economic level, making ends meet in a good year, but not in a bad.¹⁸ Uneconomic holdings have been the main cause of misery and indebtedness in India. That over-population is the general rule, is clearly evidenced by the close correspondence between the harvests and vital statistics. Both the United Provinces and Bihar show distinct tendencies of the rapid decline of birth-rate and increase of mortality when the harvests are short. On the other hand, a

¹⁷ See Mukerjee's *Rural Economy of India* for a full discussion of the relations between agriculture and population.

¹⁸ Report of the United Provinces Provincial Banking Enquiry Committee, p. 220.

succession of good harvests is followed by an increase in the number of births and general fall of mortality. Sunberg's criteria of stationary and retrogressive types of population also apply to large areas of the congested plains. All the more heavily populated districts, indeed, exhibit a tendency towards a stationary condition or even decline in the density of population. The vital statistics show violent fluctuations, and the precariousness of agriculture has left its impress in declining numbers.

(To be continued)

A GLIMPSE OF BANKING ACTIVITIES IN INDIA DURING THE FIRST HALF OF THE NINETEENTH CENTURY.—I

BY

NABAGOPAL DAS, I.C.S.

The economic and industrial equilibrium of India was rudely disturbed by the substitution of a new political authority towards the end of the eighteenth century. This disturbance was, however, more than transitory; with it came the impact of machine-made products from the West as well as the weakening of the indigenous economy, and these combined to resolve this disturbance into a definite disorganisation. To cope with the new state of affairs a number of Agency Houses and small joint-stock banks came into being during the early years of the nineteenth century, but most of them came to grief within the first four decades, ostensibly as a sequel to hazardous speculation, but primarily as a result of the fundamental lack of equilibrium in the economic position of the country.¹

In these circumstances the co-operation of the Government was vitally necessary to restore, if possible, some equilibrium in the agricultural and industrial spheres. The Bank of Calcutta had been established in 1806, and the issue of Bank notes was certainly a great convenience not only to the Treasury, but to the public as well.² But the quantitative accommodation afforded by the Bank was at first uncertain, fluctuating, and amorphous.³ This

¹ See my article on "The Agency Houses of Calcutta" in the *Calcutta Review*, March, 1933.

² This Bank got its Charter in 1809 when it was transformed into the Bank of Bengal.

³ Bengal Financial Letters and Despatches (India Office Records), Vols. 1—18 (MSS.)

was not quite the fault of the Bank, for demand itself was unsteady and fluctuating. As years rolled on, however, demand gradually increased and a general cry about the inadequacy of loanable credit arose.

Now, for years together, the Bank of Bengal practically dominated the Indian money market. The Bank of Madras was not established until 1843, and the first Bank of Bombay until 1840; and so the only real rivals were some of the principal Agency Houses and, from 1829 onwards, the Union Bank of Calcutta. These Agency Houses, however, had come to grief in 1830—33 as a result of hazardous speculation, and for a considerable time to come the void left by these houses of business and finance could never be filled up, partly perhaps due to the jealousy of the East India Company and the Bank of Bengal, but mostly due to such factors as the absence of suitable avenues of investment, the lack of available capital inside the country and the general need for caution and security in the promotion of new enterprises.⁴

Although attempts to establish separate banking institutions frequently came to nothing on account of the causes mentioned above it would be unfair to the Bank of Bengal to suggest that it did not recognise the growing demands of the commercial and business community. Even as early as 1822 the President and Directors of the Bank were proposing alterations in the Charter and carrying on correspondence with the Court of Directors in England on the expediency of increasing the capital stock of the Bank, and a new Charter was actually granted to the Bank of Bengal by the Government of India on these lines in 1823.⁵ In 1826-27, however, there was another scarcity of capital in the country, during the greater part of which the Bank was of little aid to the merchants owing to the fact that its issues very soon reached the proportion of its cash prescribed by the Charter, and

⁴ Cf. A. S. J. Baster : *The Imperial Banks* (London, 1920), Ch. 1.

⁵ *Bengal Financial Letters and Despatches, 1822-23.*

further discounts had then of necessity to be stopped. And the state of the Government Treasury and the demands thereon, expected or eventual, prevented the Government's parting with any funds to aid the Bank, as had occasionally been done before this.⁶

In all this there was a sort of tug-of-war between cautious and careful advance on the one hand and forward movement and bold risks on the other. This struggle manifested itself not only in the exchange of correspondence between the Court of Directors and the Bank of Bengal, but also in the general reaction of all interests to any new proposals made for the extension, development, or modification of banking enterprises. The years 1836—42 are marked by strenuous efforts on the part of British investors to establish two big general banks for the whole of India; in the end both the projects fell through, but the controversies and criticisms they provoked throw a very important light on the general state of banking finance about this time.

The first project came up in 1836: it was a project for the incorporation of an Anglo-Indian bank of an altogether unprecedented size and scope, and the number of its subscribers was unusually large and influential. In the words of a contemporary supporter of the project, "influenced by these views (viz., the very considerable advantages of banking finance) and, desirous also to open a safe and advantageous channel for the employment of a portion of the redundant capital of this country (i.e., England), a number of gentlemen resolved, provided they obtained a Charter from the Crown and the sanction of the East India Company, to establish a Bank in India, on a scale commensurate with the wants of that great division of the Empire, and with its capital sufficient to guarantee the most undoubted stability." The time chosen was most propitious: the Agency Houses had almost all succumbed to the crisis of 1830; the Bank of Bengal suffered from great com-

⁶ *Ibid.*, Vol. 18, 1826-27.

mercial handicaps in spite of the advantages of a Government connection, and the only probable rival was the Union Bank of Calcutta, established in 1829, but a bank with a small capital and without a Charter. The Bank of Bengal was, however, a jealous watch-dog of the needs and interests of India, and the East India Company, with its commercial interests interlinked to the Bank of Bengal, could hardly be expected to subscribe to "a proposal mooted by certain general merchants in London" without a thorough and searching examination of its details.

The proposed Bank had, as its avowed objects, an extensive remittance transaction between the Presidencies and England and China, embracing, with ordinary banking business and the issue of a note circulation, the conduct of all the debt business of the Government.⁷ The proposal was referred by the India Government to their financial experts, and very soon the keen insight of Mr. T. H. Prinsep (Financial Secretary to the Government of India) and other officials, and the searching analysis of Mr. Fullarton exposed the fallacies and defects, both fancied and real, of the whole grandiose structure.

The main arguments levelled against the proposal were three-fold :—

First, the combination of remittance operations with ordinary banking business was held to be dangerous and unsafe. "I protest against all stock-jobbing speculations or general agency dealings even for Government," wrote Mr. Prinsep, "or remittance operations involving any risk."⁸

Secondly, it was pointed out that there was no real demand for the vast sum of capital that the proposed Bank would like to invest. Mr. John Fullarton wrote in his Memorandum: "I am

⁸ *Ibid.*

not aware of any facilities which could be prudently or safely afforded to the mercantile community, or which are afforded by Charter-

ed Banks under similar circumstances, that are not provided for by the amended Charter of the Bank of Bengal as it already stands.”⁹

And here came the third and the crux of the arguments. With an elaborate mastery of details and figures it was put forward that the Bank of Bengal was quite capable of meeting all emergencies, so that the proposed Bank would only be a superfluous addition to an existing institution without bringing in any corresponding advantages. While some officials were prepared to recognise that “the Bank of Bengal had not pushed itself sufficiently forward and had not yet made the most advantageous use of the means already at its disposal,” the general consensus of opinion was that what was needed was not a new and separate institution like the proposed General Bank of India, but further modifications in the Charter of the Bank of Bengal so as to make room for better efficiency and greater elasticity.

It is rather difficult for us to judge how far these objections were prompted by principles of sound banking and finance. Undoubtedly “the commercial interests of the East India Company were inextricably dovetailed with the interests of the Government bank.”¹⁰ But it would be rash to run to the sweeping conclusion that “it was asking too much to expect an unbiased opinion on the new scheme from a body of men whose interests might be imperilled by an amalgamation and would certainly suffer from competition.”¹¹ A study of the various notes and memoranda shows that the opinions of such experts as Mr. Prinsep, Mr. Dorin, and Mr. Fullarton were based more on principles of sound banking and finance than on any alleged bias or self-interest.

Undoubtedly, the project of a General Bank for all India, as it stood on paper, was grandiose and overambitious. Such a bank

⁹ *Ibid.*, Memorandum by Mr. John Fullarton.

¹⁰ Baster, *op. cit.*, p. 93.

¹¹ *Ibid.*, pp. 93-94.

might have contributed towards keeping exchanges steady and stable, but it is pertinent to ask whether a combination of vast exchange business with business finance proper, and the management of Government debt and Government revenue would not have been unwieldy and top-heavy. Further, the contention of the promoters that it would be better able to help the Government in times of political difficulty was contrary to all notions of sound banking,¹² for, as Mr. J. A. Dorin pointed out, "the vital principle of a sound bank is that its returns should be regular and rapid. . . and if a bank lends its funds to Government in a time of political difficulty, which in other words means, at a time when Government has no money and no prospect of repaying its debts, it has little chance of being solvent and having funds available for the purpose of the merchant where its services are principally required."¹³

The Government's second argument that there was no real demand for vast sums of capital in the country was also true. Even as late as the forties or fifties of the nineteenth century the Bank of Bengal had found it difficult to invest a major part of its available surplus in profitable industrial and commercial ventures. "Not that the Bank ever refused to discount a good bill; on the contrary, this was the business done at the highest rate of interest and subject only to the limit of one lakh to one firm or one individual which was more nominal than real, the Bank having always desired to push its discount."¹⁴ As a matter of fact, there was no intense public demand for loans or discounts.

The general opinion was that even the Bank of Bengal, not to speak of the projected General Bank, would not be able to find suitable fields of investment for the extra funds available. The proportion of the Bank assets which it had been practicable to

¹² Undoubtedly this was thrown out as a sort of bait to the Government.

¹³ Bengal Financial Letters and Despatches, Vol. 58.

¹⁴ Note by Mr. T. H. Prinsep, *ibid.*

employ in loans and discounts rarely exceeded a crore of rupees and was no likelihood of an increase in the demand for this species of accommodation by a further augmentation of the Bank funds. "I am not aware," wrote Mr. Fullarton, "of any facilities which could be prudently or safely afforded to the mercantile community or which are usually afforded by Chartered Banks under similar circumstances, that are not provided for by the amended Charter of the Bank of Bengal as it already stands. Lend without security or discount without due regard to the credit and circumstances of the parties, and your issues might, no doubt, be enlarged to any amount. But even reduction in the charges of interest could scarcely of itself produce any frequent or effective increase of discount business; the utmost result of such a measure would be merely some temporary accession of custom continuing till the charges of other similar establishments should be brought down to the same level, and no longer."¹⁵ Following the logic of the English Banking system he declared that it was not the part of a great national bank, with an overpowering command of capital, to take the lead in forcing down the current rate of interest below its natural standard. The rule of the Bank of England was, he explained, rather to follow the indications of the money market than seek to influence them; she abstained from all direct competition or interference with the discount business of the private banks and held up its rate of interest rather a fraction above the market rate, but in readiness to pour her resources into the field whenever any great crisis demanded her interposition.¹⁶

These facts served to strengthen the third and the main argument of the Government, viz., the Bank of Bengal with its amended Charter of 1836 was more than capable of meeting the financial needs of the country. The plain fact was that there were no great opportunities for the investment of capital in manufacturing or

¹⁵ Memorandum by Mr. John Fullarton, *ibid.*

¹⁶ *Ibid.*

business enterprises, for such undertakings were still in their embryo. If the utility of a bank were to be measured by its accommodation to the public the Bank of Bengal did not fall very short of a high standard, at least during the first-half of the century. On the whole, the Bank was sufficient with its existing funds for the needs of the businessmen and entrepreneurs of India.¹⁷ The Government did not dispute the contention that much could be done for the prosperity of the country by the gradual diffusion of the banking system. But they recognised that "capital must be more concentrated and new habits of business acquired and fostered before the facilities which banks are capable of affording could be turned to much account." The foundation would be more secure if left to the sagacity and caution of individual enterprise. Moreover, some of the very great impediments to the creation of branch banks about this time were the distances and the imperfect state of communications, the want of an intelligent and interested public to observe and check abuses, and the difficulties of superintendence.¹⁸ Unless and until attempts were made to surmount these difficulties big schemes, however ambitious and well-meaning, could do nothing to cure the real ills of business and finance.

In these circumstances the project of 1836 fell through; but four years later it re-appeared in the Bank of Asia project with objects similar to those of the proposed General Bank. In a way this was far less ambitious in its proposed activities: it did not undertake to provide a complete Home remittance service for the East India Company, nor did it make the mistake of proposing to manage the Government Treasury or the Public Debt services.¹⁹ The projectors of the Bank of Asia based their arguments on the practical working of the various Colonial banks that had received

¹⁷ Minute by Mr. J. Allan, *ibid.*

¹⁸ Minute by Mr. Fullarton, *ibid.*

¹⁹ Baxter, *op. cit.*, p. 99.

their Charters from the Imperial Government; they asserted that the proposed Bank would tend to strengthen the connection between Great Britain and India, reduce the rate of interest of money in India, regulate the rate of exchange, supersede the necessity for the transfer of bullion, and afford a permanent supply of capital; and most of all, it was claimed, it would separate the functions of banker and trader, thereby directing the energies, skill, and means of the merchant more efficiently to purely mercantile pursuits and to the lucrative development of the resources of the country with which they traded, and leaving to the banker the important duty of an intermediate agent between the buyer and the seller of commodities.²⁰

The project raised most of the issues that had become prominent on the General Bank question. Was a bank for remittance transactions a useful institution to the public of India, and could such a concern be combined advantageously with ordinary banking practices (i.e., discounts, loans, and deposits)—And, assuming that the answer was in the affirmative, was a special Charter necessary for the purpose? Finally, were the existing banks incompetent to handle those affairs which the proposed Bank of Asia wanted to take upon itself?²¹

The general comment was no different now from what it had been five years back. Pure remittance business might be a profitable enterprise, but there was every chance of its leading to stock speculation: it was impossible to regulate by Charter what securities were trustworthy or the prices at which they might be taken. A combination of such risky transactions with banking proper was all the more dangerous; and Mr. Prinsep cited occasions when during the difficult period of capital lying idle in the Bank of Bengal he had resolutely opposed a resort to exchange business on the ground that such a procedure would threaten the entire safety

²⁰ House of Commons Papers, Vol. XXXV, 1848.

²¹ Cf. T. H. Prinsep, *Bengal Financial Letters and Despatches*, Vol. 81, 1841.

and stability of its resources.²² As to the grant of a Charter the Court of Directors pointed out that the business of banking in India could be carried on without the privileges of a Charter, while the general question of the utility of a new Bank brought forward the retort that with the recent extension of the capital of the Bank of Bengal and the establishment of the Bank of Bombay (1840) there was no need for a new bank with a vast capital.²³

Permission was, however, eventually granted by the Court of Directors, authorising the Government of India to grant a Charter under certain definite conditions.²⁴ But the grant of a Charter was withheld until the views of the Government of India were known, and these, though not unanimous, were definitely hostile. So the Charter was finally refused, although the Bank of Asia had agreed that it would not contemplate any new issue of notes.²⁵ Thus fell through the grand project owing to circumstances similar to those responsible for the failure of the General Bank.

Was it ultimately to the good of Indian business and industries that these two grand schemes came to nothing? The point is debatable, but certain broad issues are clear. Undoubtedly both the projects teemed with defects, and were not based solely on an unselfish desire to promote industrial and business finance in India.

²² *Ibid.*

²³ House of Commons Papers, Vol. XXXV, 1843, p. 3.

²⁴ The most important of these were—(1) Half the stated capital was to be paid up on opening and the remainder within twelve months afterwards. (2) Business was to be confined to the receiving of deposits, discount of bills and general operations of the bank, excluding that of issue. (3) Its transactions were to be restricted to the countries and colonies lying within the recognised limits of the Company's Charter, and they did not consequently embrace traffic in bills of exchange between these colonies and the United Kingdom. (4) Sufficient means were to be provided for giving due publicity to the state of its affairs.

²⁵ *Ibid.*, p. 7. To do justice to the Government of India it must be said that much of the suspicion was due to the vagueness of the project itself and the absence of useful details in the Memorandum submitted by the promoters of the Bank.

The fall of money rates in England and the example of big profits made by Chartered Colonial banks in other parts of the British Empire were certainly the prime incentives of these two grand projects.²⁶ On the other hand, it was not mere jealousy and selfishness that evoked the severe comments of Government experts and economists; the economic development of the country was still in a rudimentary stage, and hence there were very few opportunities for the employment of capital in really profitable and sane enterprises. The few data we have got in the various Government letters and despatches lead to quite a contrary conclusion, viz., that even if more banks were established about this time there would have been very few openings for reasonably secure and profitable commercial and industrial investments.

This does not mean that the policy of the Government with regard to the economic development of India was perfectly sound and satisfactory. The economic equilibrium that had been rudely shaken needed careful handling; the old industries of India had decayed, and there was no systematic effort on the part of the Government or of private entrepreneurs either to revive them or to replace them by new ones.²⁷ There was not any absence of credit, for, as Mr. C. N. Cooke pointed out, there could be surer proof of the soundness of a people's moral condition and of their habitual regard to truth than the prevalence of so much credit as was necessary to the existence of indigenous banking.²⁸ But unfortunately indigenous banking had decayed and was unable to cope with new needs and new economic factors. On the other hand, no amount of ambitious planning of banking finance could cure the industrial ills of India so long as the fundamental problems

²⁶ Baster, *ibid.*

²⁷ C. N. Cooke: "The Rise, Progress and Present Condition of Banking in India" (Calcutta, 1863), p. 15.

²⁸ *Ibid.* Mr. Cooke says: "The native bankers themselves are patterns of commercial morality. The dishonouring of a *hoondee* is an event of rare occurrence with them."

of the supply of labour, of the need for enterprise and efficient management, and of the general patronage and protection of the Government with regard to industrial development remained untouched. As long as the whole policy of the Government was buttressed by an economic philosophy of *laissez faire* the establishment of more institutions for the supply of capital was bound to create confusion and lead to speculative ventures. It was idle to talk of opportunities missed when there were few such opportunities for investment; in the absence of industries and manufactures the problem of industrial finance could hardly be said to have presented itself.

It would be a mistake to suppose that the projects of 1836 and 1840 were, apart from the Bank of Bengal affairs, the only efforts that had been made during the first-half of the nineteenth century for the better organisation and development of banking in India. The abrogation of the East India Company's trading powers in 1833, following, as it did the débâcle of the Agency Houses during the crisis of 1830-33, gave a very great impetus to the establishment of joint-stock associations under the name of "Mofussil Banks."²⁹ The first and most important of these was the Union Bank of Calcutta, established in 1829, a few years before the actual abrogation of the Company's trading rights. The business of this institution included the issuing of promissory notes payable to bearer on demand at its office in Calcutta, discounting bills and promissory notes not having a longer period to run than four months from the time of discounting the same, and lending money on security of personal property for any period not exceeding four months or on cash accounts to persons of undoubted security. The Bank was expressly forbidden to issue notes or discount bills in any other manner than above and was asked not to purchase lands, houses, or any other real property, nor any goods or merchandise for the purpose of making a re-sale and

²⁹ C. N. Cooke : " The Rise, Progress and Present Condition of Banking in India " (Calcutta, 1863), pp. 18-19.

profit.³⁰ In spite of all these restrictions, however, the Bank made considerable profits during the first decade of its inception. The year 1839, however, was the last high-water mark in the prosperity of this Bank. The capital was increased to Rs. 10,000,000 (1 million £ sterling) in June of the same year; but in the absence of suitable ways of getting in touch with, and financing, indigenous enterprises, this sudden increase of capital was responsible for some indiscreet investment: large advances were made to the indigo houses of Calcutta on the deposit of title-deeds of their factories and assignment of the annual produce, and resort was also made to the Scotch system of lending money on cash credits granted on the personal security of the borrower, and repayable, not at a fixed time, but as his returns became available. The crisis came in 1842-43, when many of the indigo houses failed: about 60 lakhs of rupees was locked up in indigo concerns and nothing but indigo factories were the securities for this huge debt. The Bank decided not to sacrifice the indigo factories but to carry them on, limiting the advances as much as possible and gradually disposing of the factories themselves. They argued (and with considerable justification) that if they stopped the advances the debt and the property themselves would be destroyed; on the other hand, they counted on the fair prices that might be fetched by an article like indigo of which Bengal had a virtual monopoly.³¹ Actually, however, the policy of the Directors was governed less by this consideration than by a more selfish interest: they were heavily and hopelessly indebted to the Bank, and the keeping of the mortgaged factories enabled them to ward off, to an indeterminate period, the fatal day of insolvency.³² It was this "shameful violation of their trust" by the Directors that precipitated the crisis; but in the

³⁰ Copy of the Deed of Co-partnership of the Union Bank, Bengal Financial Letters and Despatches, Vol. 29, 1831 (MSS.)

³¹ Evidence before the Select Committee on East India Affairs, 1840.

³² Cooke, *op. cit.*, p. 199.

main the crisis pointed to the danger of large capital investments in an unstable economic equilibrium.

The Union Bank was not the only important effort to supplement the banking needs of India. The Agra and United Services Bank was established in 1833 with Agra as its centre of activity, and its object was to restrict its operations to purely monetary transactions such as the discounting of bills and bonds, traffic in bullion and foreign coin, and granting of loans upon security. It solemnly affirmed not to meddle in actual commerce or trade, and after its establishment its Directors sought to make the Government a shareholder in its concern, but the Government of India was rather sceptical about its success and declined to interfere.³³

Among other mofussil banks of this period mention may be made of the North-Western Bank of India, the Delhi Bank, the Simla and Umballa Bank, the Benares Bank, and the Dacca Bank; banks of the Exchange group like the Oriental Banking Corporation, the Chartered Bank of India, Australia and China, the Chartered Mercantile Bank of India, London and China, and the Commercial Bank of India ought to be treated separately although there was no hard-and-fast line of demarcation between these latter and the former group. The mofussil banks were mostly in a rudimentary stage of banking finance—Government Securities and ordinary loans to individuals (of whom often a large majority consisted of civil and military servants of the Company) occupying most of their attention, and actual discounting of mercantile or commercial bills, and advances to entrepreneurs being negligible in amount. This was not the fault of the banking institutions as such: there was very little active demand for industrial or business accommodation, and so the funds of the banks had to be employed in private loans or Government Securities. In 1845-46 the Agra United Services Bank, for example, could show no more than 10·9 per cent of its loans and credits going to parties engaged in trade, industries

³³ Bengal Financial Letters and Despatches, Vol. 40, 1894.

and commerce, and less than 5 per cent employed in discounting.³⁴ Again, the Delhi Bank (established in 1844) had, on the 1st July, 1846, a total capital of 16 lakhs and a total deposit of 4 lakhs; out of this, loans to individuals accounted for only a small fraction while exchange operations, investment in Company's paper and cash in hand represented about 12 lakhs of rupees.³⁵

On the other hand, there were certain obvious defects in the law of mortgages, etc., which prevented some of the banks from playing their useful part in the community. The North-Western Bank of India, Meerut, for instance, was more "a Savings Bank of the Services" and its services to the agricultural portion of the community were negatived by the law of Registration of Mortgages and scrutinising enquiries into means of repayment.³⁶ The lack of a harmony between the indigenous banking system and the superimposed European structure led to the strange result that most of the advantages went to the European section of the community, so that there was much truth in what the Governor-General (Lord Hardinge) said in 1848: "Banking is a misnomer for the operations of the very many institutions as yet established which are rather of the nature of joint-stock loan societies than banks, and exercise little or no perceptible effect on the general trade and prospect of the country."³⁷

On a slightly different pole stood the so called Exchange Banks, of which the Oriental Banking Corporation (established in 1842) was the first and most important. It was intended to supply the want of a bank to conduct exchange and other legitimate banking business from which the Banks of Bengal and Bombay were express-

³⁴ The Report of the Bank submitted to the Government in response to an enquiry on "Private Banks" operating in India in 1848. *Vide* Bengal Financial Letters and Despatches, Vol. 95, 1848.

³⁵ Report from the Delhi Bank, *ibid.*

³⁶ *Ibid.* Each loan was generally secured by two or more sureties plus a Life Insurance in many cases.

³⁷ The Governor-General's Note on the Report on Private Banks. *Ibid.*

ly excluded by their Charters. The Oriental Bank made great progress, and in 1845 its head office was moved from Bombay to London: its great success was undoubtedly due to the failure of the Agency Houses and the cessation by the East India Company of the practice of making advances in India against Bills-of-Lading to the extent of £2,000,000 a year.³⁸ The prosperity of the Oriental Banking Corporation led to the establishment of other Exchange Banks like the Chartered Bank of India, Australia and China, the Commercial Bank of India and the Mercantile Bank of India—all between 1845 and 1853. But none of these banks dealt with the industrial or business finance of the country: their main operations were concerned with exchange and movements of bullion, and in that branch of banking they certainly filled up a gap.

As all these inroads were being made into the sphere hitherto monopolised, as it were, by the Bank of Bengal, the Government of India was viewing with alarm the growing exasperation of some business and mercantile interests at the absence of suitable borrowing and investing facilities in the two presidency towns of Bombay and Madras. After much waste of ink and paper and a singularly procrastinating exchange of letters and despatches between the Home authorities and the Indian Government, Act No. II of 1840 was passed by the Governor-General-in-Council for the incorporation of a Bank at Bombay "on the same principles as were prescribed for and have been observed in the re-incorporation of the Bank of Bengal by Act No. VI of 1839."³⁹ The establishment of the Bank of Madras followed three years after—again on the same principles and with the same limitations as those of the Bank of Bengal. The very establishment of these banks showed that the Government could not afford to remain quite impervious to mercantile clamour for more adequate means of accommodation.

Even a very superficial survey of the banking history and development of this period, however, points to the comparative

³⁸ A. S. J. Baster: *The Imperial Banks* (London, 1920), p. 107.

³⁹ House of Commons (*East India*) Papers, 1860, Cmd. 53.

paucity of real banking institutions promoting the banking needs of India. Even as late as 1860 a Return to an Address of the House of Lords calling for a list of all the banks then existing showed how very small the number of institutions conducted on Western lines was. Apart from the three Presidency Banks Bengal could claim only seven, and the rest of India only five; and most of these were either Exchange banks, pure and simple, or mere apologies for banking institutions.⁴⁰

The blame does not, however, lie with the banks as such. It was the industrial stagnation of India, due to causes over which banks had no control, that was primarily responsible for the imperfect and one-sided development of India's banking institutions. The absence of a definite and comprehensive industrial and economic policy by the Government was the root of all troubles. An anonymous writer of this period most pertinently asked: "How is it that, notwithstanding we are the rulers of the country and that it contains a vast population which it is now clearly ascertained, have no disinclination, but, on the contrary, a strong desire to possess articles of British product and manufacture, our exports to it should not, at an average, exceed $3\frac{1}{2}$ millions a year, being less than half our exports to the U. S. A.?" And he replied: "The cause of this anomaly is apparent. It results entirely from the backward state of industry in India and from the difficulty the people experience in raising products with which to pay for our goods. According as this difficulty is diminished, i.e., according as India succeeds in producing articles suitable for our markets, the commerce with her will be extended and may indeed attain to any conceivable limit. And it so happens that the very articles which form what are called the grand staples of India are those best suited for our markets . . . and nothing but a deficiency of enterprise and skill prevents her from attaining to the highest rank as a mart for these articles."⁴¹

⁴⁰ House of Lords Papers, 1860, Cmd. 99.

⁴¹ "Reasons for the Establishment of a New Bank in India" (London, 1836).

Considerable light on the state of the Indian money market about this period is also thrown by the reports published in the pages of "The Indian News"—a journal published monthly in London on the day after the arrival of the Overland Mail.⁴² In spite of references to occasional stringencies and tightnesses of money (very often due to political factors such as the Sikh wars and Afghan campaigns) the general impression obtained from a perusal of the reports from Calcutta and Bombay is one of cheap and abundant money in the markets. In general money was abundant in the bazar for all purposes, and sometimes considerable Government loans were opened, (e.g., in 1840), with a view to taking up much of the floating capital in the market. There were, no doubt, seasonal fluctuations in the market; but, on the whole, a superabundance of money for all purposes was the normal feature of the markets.⁴³ Even after the commercial crisis of 1847-48 the money markets soon returned to their habitually easy position, and early in 1850 it was reported that "the money market was abundantly stocked and capital readily obtainable on easy terms whenever good and tangible securities were offered." The embarrassing abundance of money continued during 1851-52 when loans were offered at 4 to 5 per cent as capitalists could not find full employment of their funds; this increased to such an extent that in August, 1852, a meeting was held among the proprietors of the Bank of Bombay for the purpose of taking into consideration a proposal for an application to Government for a modification of the 1840 Charter which precluded them from dealing in foreign exchange business.⁴⁴ Even the violent disturbances of the Indian

by an anonymous writer, p. 25. The only available copy of this book is in the Guildhall Library, London, to which I was given access through the kind courtesy of the librarian.

⁴² This was first published on the 11th June, 1840, and was subsequently amalgamated with "Allen's Indian Mail" in 1858. The last issue of the *Indian News* is dated the 27th July, 1858.

⁴³ The *Indian News* (London), 10th December, 1840; also issues of 1844-47.

⁴⁴ *Ibid.*, 29th June and 5th October, 1852.

Mutiny in 1857 caused but a ripple on the quiet abundance of money in India, and, as soon as the Mutiny was well under control, the temporary tightness of money was eased and funds became plentiful as ever.⁴⁵

All this shows how very dangerous it is to attribute the industrial stagnation of India up to about 1860⁴⁶ to the lack of credit facilities or to an alleged policy of banks deliberately withholding credit from business or manufacturing interests. The insistence on caution and security by banks was inevitable on account of the unstable economic factors in the India of this period; moreover, the unfortunate antecedent history of the Agency Houses and of the Union Bank of Calcutta clearly demonstrated the imprudence of rash and speculative investment. There is no record of any legitimate industrial or manufacturing enterprise, otherwise sound and solvent, having been handicapped, either at its inception or during its subsequent development, by the lack of credit facilities. It is, therefore, the height of folly to conclude that the industrial development of India during this period might have been improved, in the absence of other co-ordinating factors, by a mere piling up of more capital and more banking institutions.

This does not mean that the banking system, as it stood, was perfect. Undoubtedly there were weaknesses and defects; and the absence of a link between the decaying indigenous banking houses and the new banks conducted on European lines was, perhaps, the most significant weakness in the chain of industrial finance. But, apart from this, the problem of industrial finance had not as yet presented itself on any important scale in India. There was no comprehensive policy for industrial development, and even with regard to the cultivation of such products as cotton, flax-fibre, hemp, etc., which might serve as the raw materials for English

⁴⁵ *Ibid.*, 27th July, 1858.

⁴⁶ This date is rather arbitrarily chosen : in 1860 the limited liability principle of joint-stock associations was extended to banking institutions as well.

manufactures, only the most imperfect beginnings had been made.⁴⁷ Of the plantation industries, a number of tea-gardens had been started with European capital about the middle of the century, but it was only after the crisis of 1866 that they entered on a period of harmonious development.⁴⁸ Some efforts were being made with the cultivation and manufacture of coffee—but the question of finance had not yet assumed the magnitude of a problem. With regard to cinchona, only preliminary experiments and researches were being made, the question of large scale cultivation and manufacture belonging to the latter half of the century.⁴⁹ It is no wonder, therefore, that the Government of India, as well as the Home authorities, were generally suspicious of so-called investment demands of the business and mercantile classes, for such demands were often speculative and hardly distinguishable from stock-jobbing.⁵⁰ Even as early as 1843 far-seeing bankers and financiers had pointed to the dangerous tendency of some banks to advance money to indigo planters on the security of their “block,” which term included “the whole fixtures, appurtenances, and even growing crop of an indigo factory!” In search of a quicker road to a large dividend many of these banks would make advances in an extremely loose manner, e.g., even on silk filatures and on stocks of tradesmen; but their limited knowledge of market conditions and the absence of the power of superintendence always made such transactions dangerous, abortive, and unprofitable. However carefully guarded transactions of this kind were of a nature contrary to proper banking business, and nobody

⁴⁷ *Edinburgh Review* (July, 1856). Dr. J. Forbes Royle's researches on cotton, Dr. Jameson's on flax-fibre, Dr. Buchanan's on common mallow, Dr. Roxburgh's on the Sunnplant, and Dr. M'Gowan's on the rhea fibre had yet to be co-ordinated and built up into an economic policy.

⁴⁸ V. Austey : “The Economic Development of India” (London, 1929), p. 286.

⁴⁹ *Edinburgh Review* (April, 1862).

⁵⁰ *Bengal Financial Letters and Despatches*, Vol. 95, 1848.

was surprised when, after a temporary frenzy of excitement, most of these investments proved to be bad and unprofitable.⁵¹

As a matter of fact, the first sixty years of the nineteenth century were a period of the slow decline of the indigenous industries: the subsequent rise of one or two large-scale industries belongs, more correctly, to the latter half of the century. "In India there was a much more definite hiatus than in the West between the decay of the handicrafts and the establishment of factories, during which certain types of demand were largely met by imports."⁵² It was no wonder, therefore, that capital investments in industrial and business concerns were so meagre compared to the vast size and potential resources of the country. On the one hand, the small amount of Indian capital that was available for investment found an easier and more profitable outlet in commerce rather than in industry; the Indian mercantile classes eagerly embarked on all kinds of speculation in which they had an immense advantage in skill, knowledge of the country, local connexion and cheapness of agency, over the European capitalists.⁵³ On the other hand, European capital investments were not also very great: apart from investment in railways and banking institutions, they were hardly more than £10,000,000 towards the close of our epoch. The great difficulty of pioneer work and the unusual novelty of undertakings in a distant country like India naturally served as deterrents to the free flow of capital to India—a fact illustrated by the early history of railway construction and finance in India.⁵⁴ Englishmen arriving in India were attracted by what they heard of the great and rapid profits to be made from certain businesses (like indigo) and, therefore, they abandoned the idea of entering upon other undertakings which offered less advantage

⁵¹ *The Economist* (London), Oct. 21, 1843.

⁵² Anstey : *op. cit.*, p. 207.

⁵³ *The Economist* (London), April 10, 1852.

⁵⁴ *Ibid.*, Aug. 4, 1849.

and took more time to bring to a successful issue. On the other hand, the complaints made by indigo planters and allied enterprises about the obstacles they professed to meet with from the nature of the administration in India, had the effect of creating a vague but general fear of all investments in India, whether connected with the land or otherwise. Further, Englishmen looked upon India as a place of temporary sojourn, to be quitted as soon as possible, and hence did not wait long enough for the proper development of their undertakings: they left everything in the hands of careless and corrupt agents, and failure was, of course, the result. Unless and until these problems were tackled, not in a half-hearted mood, but with a far-seeing and comprehensive vision, the question of difficulties as to the actual finance of industrial undertakings could not arise at all.⁵⁵

Were the restrictions imposed on the three Presidency Banks by the terms of their Charter unusually severe? The Government rightly contended that, being more or less public institutions with enormous Government interests involved and being more in the nature of central banking institutions, these banks needed a very careful scrutiny of their business transactions. With this end in view the Charters had been made exceedingly severe both as regards the extent of each loan and its duration, while the nature of the security demanded prevented any possible speculative risks. Towards the middle of the nineteenth century, however, the construction and development of railways began to attract the attention of British capitalists and entrepreneurs, and the East India Company found that, unless the clauses of the Charters for the Banks of Bengal, Bombay and Madras were modified, initial British investments would be greatly handicapped by a lack of capital while work was in progress, and railway development would be retarded in consequence. So, in response to the clamour of British investors and promoters, and also with a view to smoothing out railway

⁵⁵ See the brilliant article on "Why is not British Capital More Largely Invested in India?" (*The Economist*, October 9, 1858).

development in India, Act XXI of 1854 was passed empowering the banks "to lend money on the security of the shares in such of the Incorporated Railway Companies as held a guarantee from the East India Company," and, with regard to interest it was provided that no such loan was in any case to exceed in amount three-fourths of the paid-value of the shares on the security of which the loan was made and in every case such shares had to be transferred to the bank by which the loan was made, either absolutely or by way of mortgage.⁵⁶ The concession was not so complete as it seemed at first sight; but it was a move in the right direction. This was followed by Act XXVII of 1855, which empowered the three Presidency Banks to transact business of a new kind, viz., to take charge of Government Securities or Shares, to receive interests or dividends on any such Securities or Shares, to invest any money deposited in the purchase of any such Securities or Shares, to sell or transfer any such Securities and to re-invest the principal, interest, or dividends so received in Government Securities or Shares.⁵⁷ Although this Act did not give any positive help to the cause of industrial development it certainly gave the banks some more freedom and latitude than they had hitherto enjoyed.

While these Acts sought to enlarge the scope of the business allowed to the three Presidency Banks the authorities were not quite impervious to the patent defect in the banking organisation of India. Apart from the three Presidency Banks which had got special Charters of their own, and some exchange banks which also had got the legal privileges of limited liability through the grant of special Charters, most of the so-called *mofussil* banks were without the legal protection of the principle of limited liabi-

⁵⁶ W. Theobald : Legislative Acts of the Governor-General of India, 1849—55. (Calcutta, 1860), p. 634.

⁵⁷ *Ibid.*, p. 803.

lity.⁵⁸ This loop-hole in the banking law of India adversely affected the progress and development of banking and business finance in two ways. Firstly, the very absence of the privilege precluded the establishment of special banking institutions catering for the varying and peculiar needs of Indian industries and agriculture. Secondly, in the absence of the privilege, the existing banks were forced, owing to the logic of facts, to act with an extra amount of caution and hesitation when making advances or investments. Act No. XIX of 1857 conferred the privilege of limited liability on joint-stock associations in general, but the first section of the Act expressly excluded associations for the purpose of banking or insurance from this privilege. It was only three years later that this restrictive section was repealed,⁵⁹ and in 1866 the famous Indian Company's Act⁶⁰ consolidated the accepted principle that "no member of a joint-stock association shall be liable for more than the unpaid portion of his share and that in case of guaranteed companies no member was to be liable beyond the amount of his guarantee."

These Acts were not, by themselves, enough to accelerate the industrial development of India; much more had yet to be done in spheres other than those of pure banking and finance before the beneficent provisions of these new measures could make their influence felt. But the Acts certainly opened a new chapter in the field of banking and industrial finance in India, for they cleared the way for varied banking activities and for the establishment of suitable institutions for the mobilisation of enterprise and capital.

⁵⁸ Some of the earliest European joint-stock banks in Calcutta enjoyed the privileges of limited liability before they were permitted in England, but most of these institutions had disappeared during the crisis of 1830, and, further, the privileges had not been conferred by any general Act, but had been granted only in individual cases.

⁵⁹ By Act VII of 1860. See Theobald : *op cit.*

⁶⁰ Act X of 1866, *ibid.*

MAHADEV GOVIND RANADE—HIS ECONOMIC VIEWS

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(Continued from the April issue.)

IV

Remedies for the Poverty of India.

The causes of India's poverty, as analysed by Ranade having been enumerated, we may now attempt at explaining the lines along which he thought a solution of that poverty could be found. The causes themselves point to the lines. These will consist in the removal of the causes, that is, in the relieving of the pressure upon the soil by an intensive industrialization of the country, by inland and foreign emigration, by the supply of capital, by the re-organization of credit, by judicial reform, by conferring full proprietary rights on the cultivators and reducing the rigidity and burden of the land tax, by giving up old traditions, conservative habits, and lack of spirit, etc. We shall notice these various remedies as explained by Ranade.

I. Industrialization of the Country.

The chief cause, according to Ranade, of India's material degeneration being the dependence on the sole resource of agricul-

ture, the chief thing naturally that would make for her economic well-being would be the promotion of a varied culture—of manufactures and commerce alongside of agriculture. "There can be no doubt," said he, "that the permanent salvation of the country depends upon the growth of Indian manufactures and commerce, and that all other remedies can only be temporary palliatives."¹

"What we have to do . . . is to learn by organized co-operation to compete with the foreigner, and take in as much raw produce from abroad as we need, and work it up here, and to send in place of our exports of raw produce, the same quantities in less bulky, but more valuable forms, after they have undergone the operation of art manipulation, and afforded occupation to our industrial classes . . . We have to improve our raw materials, or import them when our soil is unsuited to their production. We have to organize labour and capital by co-operation, and import freely foreign skill and machinery,² till we learn our lessons properly and need no help. We have rusticated too long; we have now to turn our apt hands to new work, and bend our muscles to sturdier and honester labour."³

Ranade realized full well that the development of manufactures and commerce was not an easy task. There were great obstacles in India's way to it—obstacles "represented by our old traditions, our poverty of resources, and the hostile competition of advanced races, whose industrial organization has been completed under more favourable conditions than our own."⁴ Also, he knew that

¹ Indian Foreign Emigration, p. 130.

² For this view of his, Ranade was taken to task by the *Kesari*, Mr. Tilak's paper, in an article entitled "Mahadev, in singing the praises of foreign capital is a traitor to his country." See James Kellock's book "Mahadev Govind Ranade" for an explanation of the incident that led to this article appearing in the *Kesari*, pp. 122-23.

³ Present State of Indian Manufactures, p. 128.

⁴ *Ibid.*, p. 128.

it was not open to India " to rely upon differential tariffs to protect home industries during their experimental trial " as was the case in the self-governing countries in Europe, America, and the British Colonies or to expect government bounties and subsidies to be paid out of general taxes " ⁵ as was done in Germany and France. Protective tariffs and bounties and subsidies were " heresies " according to orthodox economics which was taught to us and in which our rulers had strong faith. To bring about the industrial regeneration of India was, therefore, a struggle against great odds—" a struggle between a giant and a dwarf, and yet the struggle had to be maintained " ; ⁶ and he was sure that if properly maintained it would end in success for India.

" Natural aptitudes, undeveloped but unlimited resources, peace and order, the whole world open to us, our marvellous situation as the emporium of all Asia, these priceless advantages will secure success, if we endeavour to deserve it by striving for it." ⁷

Ranade wanted the Government to come forward and encourage the development of industries in India. The Government, he advocated, should pioneer new industries and help those that were promoted by private enterprise by guaranteeing minimum interest as in the case of railways or on the lines chalked out by the Dutch Government in Java—lines which he never tired of placing before the Indian Government as a model. ⁸ The Java system he described " as a system of encouraging the planting of remunerative crops, and manufacturing them for the European market, by private

⁵ Industrial Conference, p. 203. Also Netherlands India, p. 72.

⁶ " Present State of Indian Manufactures," p. 107.

⁷ *Ibid.*, pp. 128-29.

⁸ *Vide* " The Dutch Netherlands Government have shown the way in Java, and with less selfish motives the same method might well be tried in regard, at least, to the industries allied with agriculture, sugar-refining, oil-pressing, tobacco-curing, silk-rearing, etc., Indian Political Economy," p. 31.

agency and at private risk, with Government advances, and under Government supervision, and with the Government as the sole customer.”⁹ The effects¹⁰ of that system had been marvellous on the development of the Java island and contrast very favourably with the effects of the British economic policy in India. The contrast between the two he pithily sums up in these words—“ While the proportion of raw to manufactured produce exported from British India was four to one, the proportion in Netherlands India was one to four.”¹¹ He pointed out that the Government accepted the principle of pioneering new industries when it introduced, at great expense, new products like cinchona, tea, and coffee among the agricultural resources of India.

“ What is now suggested is that similar efforts in other directions than agricultural development should be made, not at State expense departmentally, but on the plan followed in the case of railways by guaranteeing or subsidising private efforts, till private enterprise could support itself, or, better still, by the plan followed in Netherlands India by advancing loans to private capitalists at low interest, and helping them in the choice of places and the selection of the form of investment.”¹²

He also desired the Government to extend its own custom to the products of Indian industrial enterprises and to set up a Department of Commerce and Manufactures so as to avoid “ frequent oscillations of purpose.”

⁹ “ Netherlands and the Culture System,” p. 82.

¹⁰ *Ibid.*, see pp. 88—94.

¹¹ “ Netherlands and the Culture System,” p. 92.

¹² *Ibid.*, pp. 95-6.

II. Provision of Capital.

From what has been written in respect of the part that Ranade pleaded Government should play in the sphere of promotion of industries in India it is clear that, besides requiring the Government to help Indian industries by way of providing guidance, supervision, custom, etc., he also preached that it should meet the lack of capital which was such a great hindrance in the path of industrial development in the country. The lack of capital, he said, the Government should meet by "advances, limited as in Java, to maximum amounts, and made repayable at low interest in a certain number of years."¹³ If, however, the Government was not itself prepared to shoulder the risk of lending, the next best course open for it would be, Ranade suggested, to authorise the existing Local or Municipal Boards or specially created Corporate Boards of Trade and Commerce to borrow from it at low interest the moneys required and advance them as loans for the improvement of rural and urban industries to private persons with skill and energy to turn them to account.

The advances, whether made by the Government direct or through the agency of Local or Municipal Boards, would, of course, be disbursed in the most profitable way under the superintendence of official experts, who would help and guide private efforts, and watch the interests of Government by preventing abuse, and be given towards the development of those industries in the prosperity of which the Government has a large stake or in respect of which India possesses special advantages—industries such as iron and coal, sugar, oils, beer, woollens, hides and skins, and paper and glass.¹⁴

In addition to relying upon Government to meet the deficiency of capital Ranade also wanted his countrymen to help the situation by giving up the hoarding habit.

¹³ *Ibid.*, p. 100.

¹⁴ "Netherlands Indian and the Culture System," pp. 100—103.

“ Every year we import in treasure bullion, gold and silver of the value of twelve crores worth, i.e., three crores of gold and nine crores of silver. The whole of the gold disappears, and is absorbed by the soil, and of the silver seven crores are sent by us to the Mint every year, and the rest is absorbed like gold. Since 1834 this absorbing process has secured the virtual destruction of nearly four hundred and fifty crores of wealth, which might have been turned to better account. The saving of four hundred and fifty crores in fifty years by twenty-five crores of people is not a sign of great prosperity, but we have made our position worse by burying it or using it unproductively. This hoarding, at least, proves that nearly eight crores of rupees may be each year turned to capital account, if we were only resolved so to use it.”¹⁵

When the industrial policy sketched out by him was adopted and judiciously carried out in practice, Ranade believed that “ the whole face of the country might be changed in the course of a few years.” He observed:—

“ When the country was thus enabled to obtain a new start, and factories and mills on a small or large scale were set up all over the land, the present paralysis would give way to a play of energies which would far more effectively than schools and colleges give a new birth to the activities of the nation.”¹⁶

III. Emigration.

While Ranade was convinced that the economic salvation of India would lie in bringing about a diversity and change of occupations in the country he at the same time felt that to effect this was an arduous task and would take time. For affording relief to the surplus population of India in the meanwhile he proposed

¹⁵ Industrial Conference, pp. 201—12.

¹⁶ “ Netherlands India and the Culture System,” p. 104.

that inland and foreign emigration should be resorted to.¹⁷ What emigration there was in India from the congested parts to the thinly-peopled tracts was good in so far as it went. But it did not, and could not, go far enough; nor could it "be, in any way, compared... in its immediate and remote bearings on national prosperity, with foreign emigration."¹⁸ Quite a large number of Indians emigrated to the British, French, and Dutch Colonies beyond the seas. Their emigration augured well for the future of India and should be encouraged by every means both by the Government and Associations like the Western India Association so that "the old thralldom of prejudice and easy-satisfaction and patient resignation" might disappear and its place be taken up by "new aspirations and hopes."¹⁹

Besides relieving the pressure of population on the soil, Ranade said, that the emigration and settlement of Indians abroad would afford a good market to the Bombay mill-owners for their cloth and transportation work to Indian shippers "especially with Mauritius and Natal on the African Coast." Also "the school-master, the doctor, and the lawyer, the artizans of all classes, and even the priests of different sects, have here a most favourable field for their operations and enterprise among people who are

17 See "Indian Foreign Emigration," pp. 130--169.

18 *Ibid.*, p. 133.

19 He suggested that the Government should promote schemes of colonization like the ancient rulers of India who encouraged whole village communities, with their varied elements of life to move "en masse and made them comfortable in their new homes," and induced "powerful guilds of traders and artizans from distant places to settle in new towns by free gifts of lands and houses and privileges." He thought that such colonization was possible with Africa and Australia and the East and West Indies literally starving for Indian labour, and Burma at our door opened up.—*Indian Political Economy* p. 30.

their kith and kin, and on whom sympathy would never be wasted.”²⁰

Most of the remaining proposals of Ranade for remedying the economic ills of India pertain to the wretched condition of the ryots brought about by laws that made the procedure of justice very complicated and expensive for the poor farmers, by the poverty of resources and the system of credit prevailing in the rural areas that threw the agricultural industry into a state of stagnation and depression, and by the land policy of the Government that led to the burdensomeness, rigidity, and uncertainty of the land impost. The proposals aim at the removal of all these respective evils, and are judicial reform, re-organization of credit and reform of the land policy. “Judicial reform increased banking and loan facilities and the guarantee of a permanent settlement, are the three-fold elements in that organic reconstitution of our agricultural economy which, as they hang upon each other, each receiving strength and coherence from the other, will alone rescue the country from its present plight.”²¹

IV. Judicial Reform.

The views of Ranade on judicial reform might be gathered from what he wrote on the Deccan Agriculturist's Bill of 1879.²² The Bill was meant to do away with some of the legal complications and burdens which were a cause of the misery of the ryots and it did away with those by conceding the power of going behind the bonds where there was unfairness, by extending the period of limitation of suits, by abolishing imprisonment for debts, by requiring that every bond be written by and under the supervision of the village

²⁰ *Ibid.*, p. 168.

²¹ “Land Law Reform and Agricultural Banks,” *S. J.*, Oct., 1881.

²² The Deccan Agriculturists' Bill, *S. J.*, Oct., 1879.

See also “The Law of Land Sale in British India,” pp. 347—49.

registrar, by appointing village *munsiffs* to try suits of less than ten rupees, by establishing courts of conciliation and increasing the number of tribunals, by forbidding compound interest, and by exempting land from sale for unsecured debts and heirs from payment of ancestral debts.

Ranade wholeheartedly approved of the Bill although he thought that it would “put a stop to the ryots’ credit, at all events, on a mere note of hand or bond” because of “the many obstacles thrown by the Bill in the way of realizing this security,” and that, therefore, the ryot compelled to raise money anyhow “will have no other recourse left him but to pledge his land.”²³ He also criticised the Bill on the score of its one-sidedness. He said:—

“Its objects are good, but it is not free from the charge of one-sidedness. It discourages private contracts by relieving the peasantry from obligations incurred under those contracts, while it leaves the action of the State as free and rigid as ever before. It will, perhaps, relieve the peasantry from its present indebtedness and prevent it from running headlong into debts hereafter. But as to bettering its condition much will depend upon the nature of the alterations in the land system which may be brought about by those who have the destinies of the people committed to their charge.”²⁴

V. Re-organization of Credit, Banking and Loan Facilities.

Ranade considered the re-organization of rural credit as much more important than judicial reform to which the whole energies of Government were unfortunately devoted, for in the absence of cheap capital—banking and loan facilities—a less costly and more elastic system of adjudication would not be of much avail. This was only “the gift of stones” to those who “clamour for bread” and was intended to patch up surface rents without infusing new

²³ The Deccan Agriculturists’ Bill, S. J., Oct., 1879.

²⁴ *Ibid.*

life-blood and strength into the system which is gaping with its deep wounds."²⁵ His proposal in regard to the re-organization of rural credit is based on what has been done in the line in some of the European countries where the conditions are similar to those that obtain in India, namely, in Hungary, France, Italy, Belgium, Switzerland and Germany. In those countries, he informs²⁶ us, the task of reorganizing credit has been performed by their statesmen and has been attended by wonderful success. If the same thing is attempted in India by the Government the result will, doubtless, be identical here.

"If this task were undertaken in the same spirit by those who feel its importance here in the promotion of national well-being, and a *modus operandi* established by which people seeking secure investment can be brought face to face with those who need their help and are prepared to offer that security, the nation would soon start upon a new race of life with its powers invigorated, and its energies awakened in a way no other single agency can accomplish."²⁷

Ranade suggested that the State "should encourage and even guarantee private effort where it is willing to undertake the loan business with agriculturists on less exacting terms so as to leave a margin for the ryot's subsistence."²⁸ He wanted state help because State control and supervision were necessary to inspire confidence. He did not think it essential that the State should spend its funds, for the funds would be available if only the State was to make itself responsible for the work of organization.

"The State need not expend its funds. The funds will be forthcoming to any amount if it only promises to organize the Agency, and set it at work. The Post Office and Savings Banks deposits are ready to hand. All that Government has to do is to organize District or City Committees of Indian capitalists, to em-

²⁵ "Land Law Reforms and Agricultural Banks," *S. J.*, Oct., 1881.

²⁶ "The Re-organization of Rural Credit in India," pp. 47-63.

power them to receive deposits at fixed rates and lend them at slightly higher rates to the borrowers on the security of lands, or houses, etc., the excess rate providing for a gradual amortization of the debt in a definite period, as also insurance charges and working expenses. The loans of these District Committees should be allowed priority over all other debts, and exempted from all duties, and certain and speedy execution should be permitted to them.”²⁹

VI. Reform of Land Policy.

The reform of the land policy of India was, Ranade held, the most crying want of the country. It was something by the side of which all other agencies sank into insignificance. He observed :—

“Just as mere judicial reform has been shown to be likely to end in disappointment as long as the crying need for more capital is not recognized and attended to, it must be laid down that no action that Government might take in this latter direction will lead to any permanent beneficial result as long as the pressure of revenue under the existing system of assessment continues unabated.”³⁰

The reform that he wished to see introduced was the conferment of full proprietary rights in land upon the people. “Let each man’s land,” he said, “be as much his absolute property as his house and clothes.”³¹ Or, the Government “should withdraw from its position as landlord, and look upon the land tax as a tax

27 “The Re-organization of Real Credit in India,” p. 46.

28 “Land Law Reforms and Agricultural Banks,” *S. J.*, Oct., 1881.

29 “The Re-organization of Real Credit in India,” p. 68.

30 “Land Reforms and Agricultural Banks,” October, 1881.

31 Prussian Land Legislation and the Bengal Tenancy Bill, p. 310.

like any other monopoly taxes. A permanent ryotwari settlement fixed in grain which the land produces, and commuted into money values every twenty or thirty years, can alone furnish a solution of the agricultural problem."³²

Ranade's proposal for a permanent settlement in a definite and elaborate form is contained in the following passage:—

"Our own proposal is that the permanent settlement claimable from all soils should be once for all fixed at a proportion of the gross staple produce, the proportion being based upon the principle of dividing the net profits in kind half and half between the Government and private holder. The kind payment so fixed should be unchangeable for all time, whatever improvement the private holder may effect in his land. As, however, the Government cannot conveniently receive the kind payment, its disbursements being all in cash, we would commute the kind payments into money values, and these money values would be liable to periodical changes according as prices permanently rise or fall over a great part of the country. All the Government will have to do under our arrangement will be to keep accurate statistics of the changes in prices, and the results of twenty or thirty years' price currents will show whether higher or lower prices will be maintained in the next period of corresponding duration. Of course, as laid down in the Government of India Resolution, it will not be just to raise money values to the exact margin of the permanent rise in prices. A due allowance will have to be made for increased cost of production and a higher standard of living and a proportionate deduction will have always to be made on this account. Subject to this deduction the money values will remain constant for long periods, and the kind assessments will remain permanent for all time."³³

³² "The Law of Land Sale in British India," p. 352.

³³ "A Protest and a Warning against the New Departure in the Land Assessment Policy." *S. J.*, April, 1884.

Ranade regards the above scheme of a permanent settlement as practically a panacea for all the economic troubles of agrarian India. He admits that it will not immediately revolutionize the position of the ryot and his relations with the sowcar, but says that it will certainly "effect a most desirable change in the course of time and would remedy all existing evils in a smooth natural and imperceptible way"³⁴ :—

In the first instance, it will reduce the friction that under the existing system not unoften arises between the sowcar and the ryot and induce the private capitalist to invest his capital in land. Under the prevailing policy the sowcar advances money for "the ryot's personal and unproductive expenditure and mostly at usurious rates of interest" and "has no inducement to invest his savings in the improvement of land." This is so because the cultivator occupies the status of a tenant and not of a proprietor, and the limit of his liabilities is not known; and the capitalist, in making advances to him, runs a great risk. If, however, the settlement is made permanent the ryot's present and future liabilities will become certain and the sowcar's "position will be legalised and insured against all risk;" hence "a better confidence will be engendered,"³⁵ and the capitalists will be encouraged to safely put his capital in land. He observed :—

"All improvements in husbandry suggested by science and experience presuppose a great expenditure of capital to be invested in land. The magic of property can alone induce people to incur such expenditure. Neither private sowcars nor joint-stock banks will venture to advance capital to sink wells or to use manures, and throw dams across streams, unless the ryots to whom these advances are to be made possess full proprietary rights over their lands. If the land banks have succeeded in other countries so

³⁴ "A Protest and a Warning against the New Departure in the Land Assessment Policy." *S. J.*, April, 1884.

³⁵ *Ibid.*

well, most of this success must be undoubtedly laid to the credit of the fact that the peasants in those countries are not tenants of the State, but own the land they cultivate in absolute right."³⁶

Secondly, under the permanent settlement the land will pass into the hands of those who will be fit to put it to right and proper use. The existing policy is hopelessly struggling "to keep up a poverty-stricken peasantry in possession of the soil and divorce the natural union of capital and land."³⁷ When this policy yields place to the new dispensation "the thrifty ryot will maintain his own place, and will extend his operations and rise to a better position. The indifferent and lazy ryot will make way for better people who will take his place with great advantage to the general interest," and "in course of time the prudent and thrifty classes will succeed to the ownership of land and a class of landlords³⁸ will spring up all over the country, whose interest it will be to make the most of the resources of the soil and of the great public works constructed by Government. At present the enormous expenditure of Government on railway and irrigation works is all but thrown away on account of the all-pervading poverty of the so-called peasant proprietors."³⁹

³⁶ "Land Law Reforms and Agricultural Banks," *S. J.*, October, 1881.

³⁷ *Ibid.*

³⁸ Ranade considers the presence of such a class side by side with petty farmers as essential for the stability of the country. *Vide*—"If this country sadly wants a proud and independent yeomanry as the backbone of its strength and prosperity it no less equally needs the leading and light of propertied men. A complete divorce from land of those who cultivate it is a national evil, and no less an evil is it to find one dead level of small farmers all over the land. High and petty farming, with an upper ten thousand of the holders of large landed estates, and a vast mass of peasant farmers, this mixed constitution of rural society is necessary to secure the stability and progress of the country." Prussian Land Legislation and the Bengal Tenancy Bill, p. 309.

³⁹ "The Agrarian Problem and Its Solution," *S. J.*, July, 1879.

Thirdly, under the new order of things the peasants will have no reason to complain which they have under the present circumstances about the burdensomeness of the land tax when prices are low, for if the prices fall, the assessment in money will fall also and thus will not press very hard on the ryots.⁴⁰

Ranade sees two objections that might be urged against his proposal. The first is that under it there will be fear of the Government experiencing a scarcity of revenue owing to its losing its hold on all prospective revenues or on what is called the "unearned increment." But he argues that the objection is not valid, for "the Government will not have to forego the smallest fraction of their just claims. If on account of general prosperity there is a rise of prices the money commutation of its grain assessment will also rise in the same proportion, and thus compensate the revenue for increased demand of expenditure." The Government will be moreover "free to levy special rates for facilities of irrigation actually supplied by it at public expense."⁴¹

He also points out:—

"The unearned increment theory is one of those hobbies which have been ridden to death in this country, involving the Government and the people in common confusion and ruin. We do not see, however, why there should be any loss of unearned increment. On the other hand, we firmly believe that with the ever-increasing poverty of the agricultural classes there is little scope left for the unearned increment. The present revenue policy effectively diminishes the surplus of production by rendering impossible all improvements in land. Moreover, there can be no doubt that with

⁴⁰ "Land Law Reforms and Agricultural Banks." *Ibid.*, October, 1881.

⁴¹ *Ibid.* Also *Proposed Reform in the Re-settlement of Land Assessment*. S. J., January, 1884; and, *A Protest and a Warning against the New Departure in the Land Assessment Policy*. S. J., April, 1884.

the extension of the permanent settlement, the increment, earned or unearned, will be so great that the direct and indirect taxes will yield a sure and certain increased income from all sources, which will go to make up more than all the deficiency arising from the loss of this unearned increment."⁴²

The other objection is that the Indian peasant has been and is so thriftless, unenterprising, and ignorant that no measures that Government can adopt can ever better his condition. Ranade's answer to this objection was as follows:—

"Our reply to this charge is that the French peasant was not always the abstemious and prudent citizen that he now is; there was a time when Arthur Young mourned over the condition of the agricultural classes of France. The magic of property and of free institutions has worked all this wonderful change. The degradation from which the Russian peasant has been freed by a national government can scarcely be said to be realized in the case of the Indian peasants. The Imperial Government there ventured in a spirit of statesmanship and philanthropy to redeem its serfs, and make them free men regardless of cost. The power of the sowcar and of the State landlord in this country cannot be compared in the continuity and intensity of its abuse, for one moment, with the tyranny of the nobility of Russia. The depression, however, such as it is, in this country is real, and is becoming worse every day. Let the State interfere not merely with a minimum piecemeal dose of judicial reform, but by the whole dispensation of a large administrative relief. If it subsidizes or guarantees private banks against risk during the first few experimental years, and enables them to rid the peasantry of their ancestral debts, and if at the same time it allows the land revenue to be redeemed or permanently settled at a moderate figure once for all, it will provide an ample fund for agricultural relief improvement without the necessity of borrowing a single rupee of fresh loans. The ryot once emancipated,

⁴² "The Agrarian Problem and Its Solution."

and set on his feet, and inspired with a sense that the land is as absolutely his as his home or clothes, there need never be any apprehension of his running into debt again and not practising thrift. The awakening of two hundred millions of the earth's most gifted races will be a triumph of beneficent Government by the side of which the Abolition of Slavery in 1833 in England, or the Slave Emancipation War in America of 1860, and the contemporaneous Serf-emancipation of Russia will be but child's play."⁴³

In connection with the question of the extension of permanent settlement in India it may be noted that Ranade never gave credence to the theory that the State was the universal landlord in India and that its land revenue was a rent and not a tax. "We have always maintained . . . that the State has no proprietary rights in cultivated or waste lands, and that its interest is confined to a claim for a share of the produce, which may be more or less onerous, but is not of the nature of a monopoly of differential rent."⁴⁴ And he supports this view of his by citing the authority of the ancient law-givers, the Court of Directors, the Secretary of State and judicial decisions without number."⁴⁵

Side by side the adoption of the measures that have been enumerated in the foregoing pages Ranade thought that there were some others also the promulgation of which was absolutely neces-

⁴³ "Emancipation of Serfs in Russia," pp. 275-76.

⁴⁴ He says that this theory is of Muhammadan origin and has no application to the Deccan for the Muhammadan Law did not prevail there under the Marhattas. It originated when the farming of land revenue came in the later period of Muhammadan rule.

⁴⁵ "A Protest and a Warning against the New Departure in the Land Assessment Policy," April, 1884.

See *Ibid.*, also "Proposed Reforms in the Re-settlement of Land Assessment," January, 1884.

sary if "the Utopian plenty and prosperity foreshadowed" was to "leave the dreamland of vain wishes and become an objective reality."⁴⁶ These he named as: the spread of education, liberal and technical; the diminution of taxes that press heavily upon the labouring classes, of the extravagant cost of the Government and of the ever-expanding Home Charges; foresight in forest conservancy, etc.

V

Government Help and Self-Help.

In the economic régime that Ranade was anxious to see introduced in India, and from which he expected great results, Government was required to play a very prominent part. Indeed, without the Government playing that part the régime was difficult, if not impossible, to be installed and made a success. The Government was required to help the industrial regeneration of the country in every possible way. It was required to pioneer new industries, to encourage private effort by loan advances, and guarantee of minimum interest and by lending its guidance and supervision, to build up "national, and not merely State credit," to forward schemes of emigration and colonization, to withdraw from its position as universal landlord and bestow full proprietary rights on the ryot, and to utilize indigenous resources and organize them "in a way to produce in India in State factories all products of skill which the State departments require in the way of stores."⁴⁷ But the Government hesitated to undertake all these duties because the rulers had been fed on the economics of the Ricardian School. That economics was based on certain simple assumptions which are absolute in character and universal in application and the be-

⁴⁶ "Mr. Wedderburn and His Critics on a Permanent Settlement for the Deccan," *S. J.*, January, 1881.

⁴⁷ "Indian Political Economy," pp. 35-36.

all and end-all of which is *laissez faire* or let alone. It was the fear of offending against this maxim of *laissez faire* that stood between the Government and the adoption of schemes of economic uplift of the country. Ranade, however, shows⁴⁸ that the assumption of orthodox political economy are "literally true of no existing community," of not "even the most advanced societies," and that "in societies like our own they are chiefly conspicuous by their absence." He says:—

"With us an average individual man is, to a large extent, the very antipodes of the economical man. The family and the caste are more powerful than the individual in determining his position in life. Self-interest in the shape of the desire of wealth is not absent, but it is not the only nor principal motor. The pursuit of wealth is not the only ideal aimed at. There is neither the desire nor the aptitude for free and unlimited competition except within certain predetermined groves or groups. Custom and State regulation are far more powerful than competition, and status more decisive in its influence than contract. Neither capital nor labour is mobile, and enterprising and intelligent enough to shift from place to place. Wages and profits are fixed, and not elastic and responsive to change of circumstances. Population follows its own law, being cut down by disease and famine, while production is almost stationary, the bumper harvests of one year being needed to provide against the uncertainties of alternate bad seasons. In a society so constituted the tendencies assumed as axiomatic, are not only imperative, but are actually deflected from their proper direction. You might as well talk of the tendency of mountains to be washed away into the sea, or of the valleys to fill up, or of the sun to get cold, as reasons for our practical conduct within a measurable distance of time."⁴⁹

⁴⁸ "Indian Political Economy," pp. 1—42.

⁴⁹ *Ibid.*, pp. 10-11 and 23-24.

He then gives a brief narrative of the growth of economic science with a view to showing that in all countries not excepting England, the land of its birth and highest development, the claims of political economy, as ordinarily taught in the text-books, have been seriously questioned, and its value as a guide to practical conduct greatly discounted."⁵⁰ He arrives at the following conclusion :—

“ Modern thought is veering to the conclusion that the individual and his interests are not the centre round which the theory should revolve, that the true centre is the body politic of which that individual is a member, and that collective defence and well-being, social education and discipline, and the duties, and not merely the interests, of men, must be taken into account, if the theory is not to be merely Utopian. The method to be followed is not the deductive but the historical method, which takes account of the past in its forecast of the future; and relativity, and not absoluteness, characterizes the conclusions of economical science.”⁵¹

He puts the same conclusion in slightly different words :—

“ The nature of the subject itself, as a branch of social science, which is best studied historically and not deductively, the actual practice of the most civilized nations, and the history of the growth of the theory, alike establish the doctrine of relativity, and the predominant claim of collective welfare over individual interests, as the principal features in which the highest minds of the present day chiefly differ from the economical writers of the old school, with their *a priori* conclusions based on individual self-interest and unrestricted competition.”⁵²

The repercussion of this broader view of political economy which has come to be held has been, Ranade tells us, that there

⁵⁰ “ Indian Political Economy,” p. 12.

⁵¹ *Ibid.*, pp. 22-23.

⁵² *Ibid.*, p. 23.

has set in in Europe, as also in England, a decided reaction against the system of *laissez-faire* and functions are assigned to Governments and discharged by them which formerly were regarded as being altogether outside their province. He says:—

“Speaking roughly, the province of State interference and control is practically being extended so as to restore the good points of the mercantile system without its absurdities. The State is now more and more recognized as the national organ for taking care of national needs in all matters in which individual and co-operative efforts are not likely to be so effective and economic as national effort.”⁵³

Having shown that the doctrines of the orthodox school of economists have been dislodged from their position and that their place has been occupied by a broader view of economic science, and that in every country practice is conforming to this broader view, Ranade argues that those doctrines should no longer be allowed to obstruct the path of Government in India to the promulgation of the measures of economic reform which he proposed and which he thought would altogether change the complexion of things here. In fact, the Government had, he said, already accepted the principle of State aid in pioneering such industries, as tea, cinchona, coffee, and tobacco, in building and guaranteeing railways and irrigation works and in making *taqari* advances to the agriculturists. What was now required was that it should go one better—that is, undertake and complete in other fields the work it had started in a few. India greatly stood in need of Government aid, and the Government was in a position to render that aid. India was spiritless, resourceless, without credit and poverty-stricken. The Government had enterprise, capital, credit and organization at its command. Let it utilize all these resources to

⁵³ “Indian Political Economy,” p. 34.

help India solve the difficulties in which she was placed and take its rightful place in the economic comity of nations.

Although Ranade set much store by Government aid to remove the economic troubles of India, yet it must be noted that he never thought that that aid alone was going to solve the problem for the country. Government help, he made clear, would not be of much avail if the people did not also help themselves. He said:—

“After all Government help can do but little... We have to resolve to work earnestly and perseveringly with a purpose and organization which will conquer all obstacles. The evil is too great, and of too long a standing, to be brought under control by private individual efforts. We have to work with a will, to pull long, and pull all, to pull till we succeed.”⁵⁴

And again—

“State help is after all a subordinate factor in the problem. Our own exertion and our own resolutions must conquer the difficulties, which are chiefly of our own creation.”⁵⁵

VI

Critical Estimate.

Ranade's approach to the problem of Indian poverty was quite broad in conception and thorough in detail. He gave a full analysis of the causes of the country's impoverishment although it was not as full as that which is come across after the study and interpretation of economic phenomena passed into the domain of University teachers and specialists. Even so, the analysis these arrive at differs from his in detail and minor points only, the general outlines and fundamental causes remaining the same. For example, certain factors are named besides those that he mentioned that were also responsible for the decadence of Indian indigenous industries—factors like the enactment of laws in England in 1700 and 1720—

⁵⁴ Industrial Conference, p. 204.

⁵⁵ *Ibid.*, p. 207.

that altogether prohibited the import and use of certain articles of Indian-make in that country, the wars of the French Revolution and Napoleonic regime that cut short the demand of European countries for Indian products by reducing the purchasing power of their nationals, and the rise of the factory industry in India. In the same way the reasons that lead to the agriculturists running into and remaining in debt are explained as being many more⁵⁶ than merely the machinations of the sowcar and the land revenue policy of the Government which Ranade pointed out. But all these details and minor points are not so important as those enumerated by Ranade, and then it has to be borne in mind that he was concerned only with fundamentals and not with details.

With regard to the cures suggested by Ranade for the economic malady of India they hang on the pegs of the causes he gave. Fault might be found with some of them when they are regarded in isolation and not forming an inseparable part of the whole. It might, for instance, be said that his scheme of a permanent settlement on a grain basis would not do away with the troubles of the peasantry although it would certainly put an end to the uncertainty of the present land impost and give security to the cultivators, unless it is accompanied by a radical change in the habits of the people which a spread of education alone can bring about. But Ranade thought that his proposal, if accepted and put into operation, would sooner or later bring about the desired change in the mentality and ways of the cultivators, and he certainly wanted his proposal to be given effect to along with other things

⁵⁶ These are : (1) Pressure of population on the land ; (2) absence of subsidiary industries ; (3) sub-division and fragmentation of holdings ; (4) insecurity of the harvests ; (5) loss of cattle due to famine and disease ; (6) love of litigation of the ryot ; (7) his improvidence and extravagance ; (8) his ill-health ; and (9) the change in his economic position. For an explanation of these and others see Beri and Jathar's *Indian Economics*, pp. 263—269.

—more particularly a training in the three R's. It might further be said that the same proposal of a permanent settlement, although it was very satisfactory in so far as the peasantry was concerned, would work all right from the point of view of the State only so long as prices remained high or did not fall. Under low prices the Government would necessarily experience a scarcity of revenue. But this point will be found to lose much of its force when it is pointed out that under those circumstances, even under the existing system, the Government are obliged to resort to suspensions and remissions of revenue which in effect, imply a reduced revenue for the Government. Also the scarcity of revenue that Government experiences is due not to the fact that its receipts are low, but that its expenditure is high. And Ranade desired that the expenditure should be cut down and brought within reasonable limits and that has been one of the demands of Indians since the dawn of political consciousness in the country.

It was a pity that Ranade died before the Government of India Resolution on its land revenue policy was liberated from the Press and the Co-operative Societies Act of 1904 was passed. The former did not concede what Ranade and other Indians wanted in regard to the land policy of the Government, but it gave a definiteness to that land policy, exempted or allowed for improvements in fixing the land tax and freed prospective assets from the levy⁵⁷—

⁵⁷ In reference specially to the Bombay Presidency with which Ranade was more particularly concerned we may quote James Kellock's remarks on land revenue reforms the Bombay Government introduced in 1884. "The Bombay Government never exactly adopted the land policy which Ranade so vigorously urged, but in 1884 it decided to take steps to reform the assessment laws, and the lines along which it proceeded was to introduce a large element of permanency. The classifications of soil that had been evolved were accepted as fixed once for all; no enhancement of tax was to be made on account of improvements made by the holder; changes of assessment were to be made only on consideration of

some of the reforms the absence of which was as he explained a cause of harassment to the ryot. The Co-operative Societies Act was of those measures the necessity of introducing which Ranade always impressed upon the Government. In so far as co-operation is concerned, his hopes as to what it would do for rural India have, to a very large extent, been fulfilled.

Ranade did not live also to see the steps that the Government has taken to help the development of industries in India—both rural and urban—by the establishment of Department of Industries under the central as well as the Provincial Governments. Those steps are what he wanted should be taken. Also there have come differential tariffs which Ranade although he must have wanted them did not even think of suggesting for he regarded them as “impracticable ideals” being “heresies according to English political economy.”⁵⁸

Ranade's bent of mind was thoroughly historical. He could not stand doctrinaire views that did not take into account details and local conditions. He believed in the law of relativity and correspondence and preached the same.⁵⁹ He declared that “our growth could only be in strict correspondence to our aptitudes and surroundings, and that we should be on our guard against precipitation and hothouse culture, which can never lead to permanently beneficial results.”⁶⁰ This being his view, and a right view it was,

such things as rise or fall in the general level of prices, benefit accruing from the building of railways and similar public works: and limits to the possible enhancement at any one time were set.” P. 43, *Mahadeo Govind Ranade*.

⁵⁸ Industrial Conference, p. 302.

⁵⁹ His lecture on “Political Economy” is an exposition of this law.

⁶⁰ “Indian Political Economy,” p. 1.

he turned, in the absence of the history of his own country affording him any guidance for action, to the history of other countries where the conditions were practically the same as here, to find out what had been attempted there to meet identical situations so that the same things might be engrafted on the Indian soil. Russia, Prussia, France, and Netherlands India afforded him the light he needed, and he explained this in his articles on the "Emancipation of Serfs in Russia," "Prussian Land Legislation and Agricultural Reforms" and "Netherlands India and the Culture System."

The service that Banade rendered to the cause of political economy in India consists in this. Firstly, he coined the phrase "Indian political economy" and explained what it should connote. This was a unique service. Secondly, he gave a much more reasonable view of the "drain" than was current at the time or for some time to come. Thirdly, he took an unbiased view of the public works policy of the Government and of the advantages and disadvantages of railways and roads. And, lastly, he advocated the import and utilization of foreign skill and machinery even when opinion in certain quarters at any rate resented it. In short, his service may be said to lie in his having raised Indian economic problems above political considerations and having imported reason instead of bias into their discussion.

SOME TYPES OF COTTON MARKETS

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The observations recorded in this article are based upon my investigations in the three southern districts of Madura, Ramnad and Tinnevely. Nevertheless they should be capable of application to the cotton markets throughout the Presidency. A study of the organisation of markets in all its aspects is becoming imperative in this province and elsewhere, since on the proper working of it depends the prosperity of the ryots and the improvement of the quality of the product, which is their money crop par excellence.

Just over a hundred years ago—in 1831—was the first shipment of cotton made from the port of Tuticorin, by one Mr. Groves, a merchant of Liverpool, then doing business in Ceylon. He came across to Tuticorin, bought 200 bales of cotton from an English merchant at Palamecottah and exported them to Lancashire. The transaction was a great success financially. The very next year a cotton gin and press were set up at Tuticorin and a busy trade in raw cotton began.

Much interesting information is available regarding the character of cotton trade at this time. European merchants were busy at the collecting and pressing of cotton throughout the Tinnevely District, then the only cotton-growing area in this region. The cotton that they collected was the hand-ginned cotton in every cottage or in the factories of the Mediaeval English type, owned and worked by capitalists. Since the prices were attractive, such capitalistic merchants entered into forward contracts with the European exporters and were supplying cotton in required quantities. Even fifty years ago Tuticorin is said to have absorbed fifty to seventy thousand bales. In 1932-33 the figure was only 112,320 bales.

For the past hundred years Tuticorin has been, and is still, an important market for ginned cotton. But in recent years she is dealing in power-ginned cotton only, hand-ginning having completely disappeared. From 1900 onwards ginneries have been established in all the important cotton-growing villages and cotton is being sent therefrom by rail or bullock carts to Tuticorin. The buying firms get the bulk of the cotton by forward contracts from the native merchants.

Dealings in ginned cotton are comparatively riskier, and involve large capital resources and much technical knowledge, and hence the whole trade of Tuticorin is in the hands of about a dozen merchants. Another important reason for this peculiarity is that these merchants own their ginneries in the interior and are therefore able to control the supply of *kappas*. The big exporting firms do not encourage the small dealers whose ways and methods are not quite satisfactory. The cotton merchants have started recently an Association to look after their interests, but there is not yet anything important to record.

Whereas the market for cotton is so well organised, that for

kappas is on a different footing. Tuticorin has not developed to any considerable extent the trade in *kappas*, and it is therefore not surprising that there is not a large market place for *kappas* as in certain other centres. The carts that arrive there stand on either side of the road and transactions take place at any part of the day.

In certain respects the *kappas* market of Tuticorin resembles several other small markets to be found in the interior. One common feature to all of them is the absence of a fixed market place. Transactions take place now in front of the commission shop, now on the roadside, now before a ginnery and at no fixed hours of the day, too. The disadvantage is that it does not bring all the buyers and all the sellers together so as to ensure the greatest amount of free competition. It does not allow the dissemination of market information as widely as possible. It does not standardise trade methods and practices and remove the causes for frauds and malpractices. But these defects should not be exaggerated as they are not common to all the markets of this type. At the same time it should be pointed out that unless the volume of transactions is on a large scale the provision of good market place is not feasible except at public cost.

To the above category belongs also certain other kinds of *kappas* markets, but which, in reality, are only adjuncts to the ginneries. As has been pointed out before, ginneries have sprung up even in large village centres. And they have been responsible for absorbing the increased volume of cotton and have to a great extent even adversely affected the well-established larger factories in the bigger towns and wholesale markets. These ginneries have enabled the larger ryots to gin their own cotton in their own villages, store it up and sell the lint at very favourable prices. Ginning charges also have been brought down very low, since village labour is employed at low wages. The price of lint has.

been increased and that of seeds lowered on account of the savings in the cost of transport to the older and the more distant ginneries. On the whole from the point of the marketing charges there has been a distinct gain to the ryot.

But unfortunately these ginneries where *kappas* is brought and sold have facilitated the multiplication of merchants and have given rise to very serious problems regarding the quality of cotton. These small merchants, with very little experience and undoubtedly without adequate capital resources, do not carry large stocks in even running lots so as to enable a spinner or his agent to purchase a large quantity of a fixed grade and staple. Furthermore, many of them mix cotton of all grades and staples, sometimes ignorantly and sometimes intentionally which have very serious consequences on the quality of lint and the seed used for growing the next crop. Unless these ginneries are owned and controlled by the spinners or the large wholesale cotton merchants there is very little chance for the quality of cotton to improve.

In this connexion it is interesting to note what Russia is doing to prevent the deterioration of the quality of her cotton. "The large number of small badly-equipped gins which existed before the War has been replaced by a smaller number of large up-to-date plants with a combined capacity of more than four times that of the pre-War gins. All the gins are equipped with the most modern machinery and pressed. Whether we should follow this example or not is a serious problem of the future.

Now we may take the case of a few organised wholesale markets for a close study to see in what respects they are functioning properly and in what they need improvement. In all the three districts there are only two such wholesale markets, one at

Virudunagar and another at Sattur, both in the Tanjnad District, and, in the old cotton belt producing the standard crop called Tinnevellies.

In each there is a spacious market place with strong compound walls on all the four sides, constructed at a great cost. There are adequate storage and godown facilities. The market authorities have provided all the requirements inside the market cart-stands, sheds, drinking-water for men and cattle and weighing instruments. Transactions take place only at stated hours and there is a large concourse of buyers and sellers. Money is paid promptly. Prices rule higher owing to keen competition. Price news service is also efficient. All complaints in the market are enquired into and settled without the least delay and inconvenience to the parties.

It is, therefore, not unreasonable that the sellers should be asked to pay for the advantages derived in such an organised market, in the shape of tolls, cart-tees, broker's commission, etc.—all amounting to nearly Re. 1-8-0 for each cart-load of cotton. It is nearly double of what obtains in the smaller markets described in the previous sections. The higher rates charged have been one of the causes for the establishment of smaller markets in the interior of the cotton-growing villages.

It goes without saying that such large organised markets can exist only when there are large ginning factories and buying firms. For instance at Virudunagar there are four buying firms, with an annual off-take of 30,000 bales. Here the bigger merchants are able to offer higher prices for *kappas* since they can store it and sell when the market improves. Cotton of any grade in even running lots can be bought here in any quantity. It is no exaggeration to say that these markets function as efficiently, if not more, as any of the so-called regulated markets and the Managing

Committee as well as the Cotton Merchants' Association are administering the market without creating any of the difficulties which we are likely to get when Government-controlled agencies take their place under the aegis of the Marketing Act. There are grounds for apprehension that any misguided attempt to bring these markets under the scope of the present legislation would be a positive danger.

But is everything well with these markets? One criticism or accusation that has been directed against these markets is that they are levying a small toll in the shape of "sample cotton" from each cart that enters the compound (one or two lbs. of *kappas* per cart-load) and the proceeds which amount to several hundreds of rupees in a year are devoted entirely for the use of the particular community that owns and manages the market. There is truth in the criticism, and even though the proceeds in both the markets are utilised for the support of two high schools, where no distinctions of caste or creed are observed, one cannot but admit that there is a tinge of communalism in the administration of the market. But there is another aspect to the question. Are not the proceeds of the market to be considered simply as legitimate profits for the investment of capital and the earnings of management? Further, there is absolutely nothing in the nature of a monopolistic control of the cotton market. In both these places each of the two predominant castes have separate and rival markets of their own. Sometimes even aggrieved individuals, too, are trying to set up independent markets in addition to the existing ones.

Just a word of caution. If these two particular cases are considered it would be wiser to allow these markets to exist unhampered by the present legislation and intervention will be justifiable only at the express desire of the market authorities and not on account of any outdoor pressure exerted by interested political

or communal parties; and even then only one of them should be experimented upon, instead of suppressing one and reorganising the other only as the regulated market.

Now to the last type of the market—the village itself. Our ryots are all small holders and it is difficult to obtain from the great majority of them cotton of uniform grade and staple in even running lots in any large quantities. The very large number of the village buyers make a huge muddle of the affair by snatching small quantities from each of the ryots and mixing the cotton hopelessly. This “hog-round” method of purchasing cotton—as the Americans term it—has been the primary cause for the deterioration of the quality of cotton in the U. S. A. Co-operative marketing and the propaganda in favour of “community-cotton” growing are to some extent removing the evils of buying “point cotton.” But in these parts co-operative marketing is still an untried experiment and the chances for the latter device to be adopted by our ryots are as remote as those for any large scale adoption of the improved methods of cultivation. It is therefore very essential that something should be done to remove the evils of the present village market. But it is here that legislation has the least chance of success.

There are two other evil practices (they are non-existent in the United States of America) which accentuate the difficulties of the village market. The practice of paying wages for picking cotton in kind is almost universal in this Province. The quantity of *kappas* which each woman or child picker obtains is very small, but when the pickings from several fields and at several periods are stored and sold to the village buyer the same trouble of mixing is created. The second evil practice which leads to the same result is the bartering of cotton for grocery and sundries at the village retail shop. *Kappas* collected by the retailer in this way in small dribblets has a very bad reputation for quality and grade and sells

at astonishingly low prices. The unscrupulous small merchants welcome this stuff for the purpose of mixing. One need not enlarge on the consequences of these two evils on the improvement of Indian cotton. The remedy lies entirely in the hands of the spinners. If they would pay a good premium for grade and staple and discourage the mixed stuff by a sharp discount there is every chance for the farmer and the trader to be benefited.

AMERICA'S ABANDONMENT OF THE GOLD STANDARD AND ITS SIGNIFICANCE

BY

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The Reasons for the Reimposition of the Embargo on Gold Exports.

The reimposition (1) of the embargo on gold exports on April 15th, the suspension of gold payments against credit instruments, or "gold representatives" and the abrogation of the gold clause from America's debt contracts have not been understood aright. While the material facts about the meaning, working, weaknesses, and defects of the gold standard are not much in dispute there is no unanimous agreement on any alternative standard which the suffering humanity might adopt. Currency historians have traced the numerous suggestions for "sound money" since the beginning of the nineteenth century.¹ It is opined that America's abandonment of the gold standard is virtually a significant move to restore a slightly improved gold standard mechanism once again. Is this explanation, that it is a covert move to hasten the general restoration of the gold standard, after all the right one? Why do countries generally abandon the gold standard? Did such conditions prevail in America? If not, what other conditions were responsible for this move? Can she succeed after all in gaining her different motives which actuated her in abandoning the gold standard? Is the abandonment of the gold standard the best way of restoring a revalued gold standard?

¹ On the first day of President Roosevelt's administration he had to close all banks for several days by Proclamation issued on March 4, 1933. On March 13th about 350 banks reopened their doors under license. The embargo on gold exports still exists.

Why should a Country Abandon the Gold Standard?

A country is said to be on the gold standard when the Central Bank, the credit and currency authority of the country exchanges the currency unit of value for a fixed weight of gold. The dollar is convertible into 23.22 grains of gold when it is on the gold basis. The other usual attributes of the gold standard are the redemption of currency in gold metal, free coinage, legal tender provisions, free movement of gold to and from the industrial arts, free import and export of gold within the mint parity of exchange and reserve ratios between gold, currency, and deposits.²

To perform the farce of the gold standard a huge gold reserve is usually amassed in the hands of the Central Reserve Bank. So long as this reserve is sufficiently great the suspension of gold payments either for internal purposes or external purposes will not take place. When the prohibition on gold exportation is passed it takes place as a result of the fear that the slender gold stocks will not enable the banking machinery to run on smooth lines. This was the reason why England went off the gold standard on September 21, 1931.³ Sheer inability to pay the external obligations in gold and declining gold reserves leading to a severe shock to confidence explain the *raison d'être* of the suspension of the gold standard in England. Can the self-same reason be the cause for America's abandonment of the gold standard?

Manceuvre back the World to the Gold Standard.

Though the initial embargo was a panicky measure to enable the authorities to enmass gold stocks as against huge bank deposits which had to be paid to the bank depositors, the recent resuscita-

² See F. W. Hirst, "Money" which gives a summary of these suggestions.

³ The *Financial News* of April 21 says: "England abandoned gold at the last ditch under pressure of an enormous outflow of foreign funds with a heavy adverse trade balance and an overvalued currency with little more gold in the vaults than 130£ which was already pawned for emergency credit and with a bank rate which was raised from 2½ to 4½ per cent."

tion of the gold embargo and the abandonment of the gold standard were not due to mere banking and financial difficulties. America was not forced off the gold standard by dint of poverty or adverse circumstances but it was a deliberate move to bring back the other countries to some modified form of gold standard. The object was somehow to manœuvre the world back to the gold standard, perhaps at a new parity, so that the burden of debts might not be too heavy or great. Similarly, gold purchases from the Central Banks have been abandoned with the view of conserving gold stock.

The entire gold stock in the hands of the nation was running into the colossal figures of four and a half to five billion dollars—about half of the world's stock of gold. Though the figure staggers the imagination of the reading public still it must not be construed as a sign of positive strength for this gold stock when compared with the huge outstanding obligations of the entire banking system is after all relatively insignificant. The Federal Reserve Board bulletin says that the proportion of gold against its liabilities is roughly 60 to 70 per cent. Besides there is the safety valve of reducing gold reserve proportioned under inclement circumstances. It must not, however, be forgotten that outside the Federal Reserve Banking system which comprises only one-third of the United States of America banking structure, State Banks, Trust Companies and other banking companies do exist. The credit manufacturers do not evince a desire to keep such high proportions of gold as do the members of the Federal Reserve Banking machinery. Hence even this huge stock of gold is too inadequate for her banking needs. This itself leads to the conclusion that by devaluation alone can the return to a gold standard take place.

America's Creditor Position.

In addition to this imposing stock of gold the United States of America has been enjoying a favourable balance in international

dealings. No external debt exists on this score. Though, of late, she has ceased to export capital as in the decade 1919—1929, she has not been reinvesting interest payments and capital repayments back in the hands of the debtor countries, as England used to do in the pre-war days.⁴ Although the flitting short-term funds have been menacing the Federal Reserve Banking structure, yet it has an imposing amount of foreign credits in the important money markets of the world.⁵ Her bank rediscount rate was just reduced to three per cent before the immediate declaration of the embargo on April 19th. The above line of reasoning would convince every impartial reader of the fact that the actuating necessity to levy an embargo was not the mere paucity of gold stock against its short-term liabilities. Hence the view that she has been forced off the gold standard is entirely erroneous. Perchance it was a deliberate policy that made her abandon the gold standard. As one recent writer puts it, "the abandonment of the gold standard is a temporary measure of security taken on her own volition rather than an enforced and enduring separation."

Has America Realised the Need for Stable Money?

If the departure from the gold standard is not due to any inherent weakness of the banking structure as a whole it must be attributed to other causes. If these do really account for her action America presents an example—perhaps a very curious one—of a strong creditor country abandoning the gold standard due to the realisation of the fact that "gold backing is not after all absolutely essential for securing currency stability." Were this

⁴ It is the established opinion that of the vast capital investments of England these reinvestments have been far larger than the original investment of capital.

⁵ The Federal Reserve estimates that the claims of foreigners amount to Dol. 1200 millions while American short term balances amount to Dol. 1300 millions: Even the long-term foreign investments amounting to Dol. 2250 millions at the end of 1931 cannot be sold for the stock market prices are very low. It would be folly to realise them at this period.

argument to be believed the ingenious suggestion that the abandonment of the gold standard was only a move to hasten its general restoration cannot be believed. It is indeed true that Prof. Fisher has launched forth a well-directed propaganda for the realisation of stable money but his complicated scheme of a "compensated dollar" has not won universal approbation. The Stable Money Association itself has taken up the cry and though these reformers succeed in proving that gold ought to be "the servant and not the master of mankind" they have not envisaged any clear scheme to put an end to the monetary muddle. It is clear then that the lay public who are uninitiated in the mysteries of currency craft do not grasp the significant truth of the currency doctrine which says that "gold backing is not after all indispensable for currency stability." The economic function of the gold standard is to protect economic society from excessive short-term fluctuations in money. It is these ignorant members of the lay public, the bankers, and those economists who incline to the opinion that all other currency reforms except that of a managed gold standard are impracticable, who uphold the contention that America's abandonment was a god-sent move and would hasten the resurrection of the managed international gold standard. These do opine that the "free gold" would be redistributed and that the rules of the gold standard game would be redrawn in the light of the existing circumstances. By honestly cooperating with the other gold-using countries, and by a systematic carrying out of the recommendations drawn up by the Gold Delegation Committee, gold can indeed become the monetary standard once again, even if the threatened shortage of gold were to materialise. King Gold might indeed become a constitutional monarch subject to some sort of supernational management arising out of the cooperation of the Central Banks of the world. The world would be led back to gold parities of exchange though in some cases it might be in devalued monetary units. If world economic conditions facilitate the successful working of the gold standard, it might lead to the establishment

of the gold international monetary mechanism. These might be briefly referred to as follows: Fully backed up banking systems loaning right up to the permitted ratio of reserves, fully sensitive capital movements and goods movements, elastic demand for international products and a smooth course of world trade, varying costs of production responding fully to changing movements in prices and the preservation of an adequate surplus of "free gold" in the hands of the Central Reserve Bank.

The Example of England's Depreciation.

But it is not this sole desire alone that has actuated the United States of America in abandoning the gold standard. The depreciated currency of England subsequent on the abandonment of the gold standard did really give a fillip to her foreign trade. English industries could regain their hold on lost foreign markets as a result of the cheapening of the external value of the paper pound sterling. America herself experienced the vicious "dumping" of English manufactured goods so that a keen desire was displayed by the American industrialists to depreciate the dollar proportionally so that they might not be defeated in neutral markets. They were so enamoured even of the temporary fillip to their foreign trade that they voted blindly for a vicious inflationary campaign which had as its objective the depreciation of the value of the dollar by half. But the abandonment of the gold standard is too belated a measure for most of the important countries have already given up the gold standard. She was more or less swept away by the tide and a clever handling of the situation in 1930 could indeed have saved her. Much of the disaster befalling her during 1930—1932 could have been averted.

What of Banking Interests?

It was not the industrialists alone who sponsored the inflationary campaign. The bankers themselves had to initiate relief agencies to help small country banks who found that their landed

and other securities had fallen in value, so that the foreclosing of loans meant inability to repay on the part of the borrower, and such banks, who had to pay their depositors on call, found themselves unable to do so, as a result of these and other frenzied banking practices, such as the granting of loans to enable people to speculate heavily in the value of securities. The locked-up medium of exchange stood in the way of their ability to repay deposits.⁶ The Reconstruction Finance Corporation was a device to aid such struggling banks. Failures of small banking houses have led to disaster, consequent distrust, and loss of confidence. Gold dollars and bank notes of convenient denominations were hoarded with the result that more bank notes had to be issued to cover the gap created by the disappearing gold dollars and bank notes. A kind of currency which would not disappear nor retard the velocity of its own circulation would have defeated such hoarding in a community addicted to the banking habit. Hence arose the suggestions once more for the resuscitation of "stamped money" or "Free Money" as it was designated by Silvio Gessel. The suspension of the gold payments was only a desire to combat the newly-arisen hoarding propensity⁷ for the garnering of mere inconvertible paper not endowed with full legal tender-privileges would defeat the objects of the hoarder. A glance at the circulating currency of the United States of America would explain to us this object.

⁶ Out of a total ten billion currency circulation about five billions were circulating before the habit of hoarding currency was developed. This hoarding tendency was accelerated greatly as a result of bank failures.

⁷ American gold coins were also exported freely to the European Continent for industrial use, i.e., to be melted for making gold articles. Many of the American 20 dollar gold pieces have disappeared in this way and the embargo on gold was virtually to prevent domestic hoarding and an embargo on exportation would check the industrial use of American gold coins.

Can Hoarding be Checked after all?

A more effective piece of legislation to check the hoarding of gold coins was the threat of punishment.⁸ Hoarding has been declared unlawful. All withdrawn gold from the Federal Reserve Banks had to be returned within the stipulated period. To make this executive ordinance effective fines were to be imposed on all offenders found guilty of hoarding. No person could have at any time more than 300 rupees in gold or gold certificates. The punishment for this was to be ten years' imprisonment. Thus the attempt was to check hoarding even for internal purposes for the hoarded gold if stationed in the hands of banks would lead to expansion of credit nearly three or four times the actual hoarded gold. Thus improvement in banking practice might also ensue out of this crisis.

Selfish Interests.

The other view is that America went off the gold standard deliberately to have the advantages of a managed currency quite properly in its own selfish interests. This will not tie the hands of the Government in defending the gold standard. A bid can be openly made for any better monetary standard that the World may decide on at the forthcoming reconvened World Economic Conference. Mere vested interests in the maintenance of gold value would defeat the ambition of the United States of America people in the above direction. If the entire world were to re-elect gold as the future monetary standard the United States of America would easily follow⁹ suit.

⁸ Originally during the early bank holidays of February 1933, Gold was hoarded to the extent of a billion dollars. The recrudescence of hoarding took place and more than 200 million gold dollars were hoarded in the first week of March 1933. Hence the above-mentioned piece of legislation was enacted by President Roosevelt.

⁹ This is what the Second Resolution of the World Economic Conference (Monetary) Sub-committee aims at.

Dire Need of Reflation.

Finally the severe national budgetary position¹⁰ had to be safeguarded somehow or other. As taxation could not be raised to such a high pitch as to cover the staggering deficit, the policy of monetary expansion was decided upon as a saving measure. Banks as well as the Government needed additional currency to safeguard their position. Virtually this could not be secured under the old gold reserve regulations of the Federal Reserve Banking system. The suspension of gold payments and the authorising of the banks to issue notes against Government securities¹¹ were after all intended to supply the additional currency needed by the nation. Apart from realising their respective wishes the sole objective of raising prices can be achieved by pursuing a "policy of managed credit currency." But realising that commodity prices have not risen sufficiently wages are being expanded by the new Industrial Credit policy inaugurated in July, 1933.

An improved financial policy and a huge stock of gold might enable the United States of America to tie the dollar credit and currency to gold at its old parity. But the main defect of the United States of America gold standard mechanism as revealed during 1923—1929 period was this. The power to produce was constantly expanding while the power to consume did not parallel it.¹² A

¹⁰ As business depression continues the returns from taxation would be disappointing. Mere retrenchment of expenditure, however drastic it might be, would not enable the Federal Government to balance the budget. Besides the cutting down of expenditure would take certain time. Certain time-honoured items like those of expenditure on veteran's benefits would have to be cut down. Other meaningless Federal subsidies have to be curtailed. Every other measure for restoring Government credit must be resorted to.

¹¹ This was granted by the Glass-Steagall Act—Government bonds can be made the basis of Federal Reserve Notes. Monetary inflation can thus be secured without the addition of gold backing.

¹² See the Booklet entitled "The A. B. C. of Technocracy": "The obsolescent system of price and profit which fits well into the customs, business and social practices of the man-hour era, cannot cope with the age of the kilowatt hour.

regime of falling prices became inevitable.¹³ Only in certain few industries alone wages and salaries expanded, but this expansion was not enough to secure lasting prosperity. Credit currency with constant purchasing power for internal purposes is needed in the modern mechanised age. It need not be tied to gold after all but certain representative standardised commodities can be chosen for this purpose by the use of an index number.

Wages and salaries, i.e., power to consume, must expand if wholesale prices fall according to this index number. Wages and salaries have to be decreased if the Index Number rises. Governmental authority has to bring about these intelligent changes by regulating wages just as it has secured the present eight-hour day and other improvements in the wages, hours, and conditions of labour.¹⁴

While the abandonment of the gold standard has taken place, efforts are being made to maintain the old exchange parity of the dollar with gold units. This is nothing but a tacit recognition of the importance of exchange parities. Quite assured of her financial strength the attempt to maintain the old parity with gold units is being made by securing an orderly credit expansion which alone would prevent a fall in the exchange rate. A fall in the exchange rate would prejudice the creditor status of the country and destroy confidence in business circles. There have been indeed few serious exchange restrictions accompanying the abandonment of the gold standard which itself was done solely to check gold

¹³ Wheat and other commodity prices began to fall precipitately, so much so that even trading was suspended voluntarily and an enforced attempt is being made to raise purchasing power within sixty days so that a new crisis might not arise out of falling commodity prices. Shares also fell precipitately in sympathy with commodity prices.

¹⁴ The new Industrial Recovery Act is based on the above rationale. Industrial output, wages and prices are being controlled by the State. The Cotton Textile Code issued under this Act raised wages by 30 per cent and reduced hours of work by 25 per cent. Trade and white collar workers will similarly be subjected to official regulation. It would lead to reduction of unemployment at the same time.

exports from the country, and from the Central Banks into the currency circulation of the country. There is a free exchange market and prohibition extends to pure speculative dealings or purchases of foreign currencies. So if the restrictions are not so severe as those of the Reichsbank, yet the real objective was to pave the way for the shedding of the gold coins. Perchance America would develop the gold bullion standard form of monetary organisation, if the gold standard were to be resurrected at all. At one stroke the much needed simplicity in the matter of her complex currency circulation would be secured. At present there are too many difficulties in exchanging the diversified circulating units. The following table as given by a recent writer shows the different forms of currency held by the American public.

Denomination.	Estimated amount in circulation.	
	Dollars in millions	
Gold coin and bullion	...	479
Gold Certificates	...	591
Standard silver dollars	..	28
Silver Certificates	...	350
Treasury Notes of 1890	...	1
United States Notes	...	287
Federal Reserve Notes	...	2,707
Federal Reserve Bank Notes	.	3
National Bank Notes	..	836
Subsidiary coin	...	362
		<hr/>
		5,644
		<hr/>

Besides the final extinction of silver as a currency unit which may not be agreed to by the United States of America for she has

recognised the possibility of securing war debts in shape of silver, it will lead to the stabilisation of value of silver at a higher level than at present and thus secure the interests of the silver producers of the United States of America who are a power in politics.

The currency ideal to be striven for is the displacement of all these different units by the Federal Reserve Notes. These would have the same domination as the Canadian Bank note has in the currency circulation of the Canadian Dominion. The elastic Federal Reserve Notes should become the sole circulating paper currency. The suspension of gold payments might after all prove a necessary prelude towards currency reform.

Some Interesting Developments.

It is most probable that some other interesting developments might ensue. A new method might be developed in the direction of adjusting trade balances. At any rate for internal purposes this refined system of barter is already in vogue. Even Cinema-holders and entertainment-wallahs are already taking some kind of exchangeable products in return for their service. Some such nation-wide schemes organised by the Import Boards might be developed. Cooperation between the Federal Reserve Banking system and the other outlying banks, Trust Companies, and financial companies might be forthcoming. This would be of infinite value in solving many difficult problems which may arise in the near future. The formation of an Exchange pool for providing as a first charge thereon the obligation of trade debits due by America may be undertaken. The uncertain government and quasi-government finance position would be rectified for it is these which have produced the greatest danger to confidence. An abuse of bank credit to meet these governmental deficits cannot be recommended, as it leads to inflation of prices. But this cannot but be of a fleeting nature on account of its effect on the exchange and on the costs of exporting industries.

Will America Realise Her Objectives?

We have seen that monetary depreciation was deliberately enacted to enable America to collect the War Debts and Reparations from European debtor countries. These debtors will find it possible to repay their debts in depreciating dollars rather than in appreciating gold. Although it is real industrial effort that enables them to secure the needed foreign balance to repay American indebtedness still the vain presumption that debts can be collected easily if insistence is made on their repayment in dollar currency is responsible for the big drive which led to the policy of monetary inflation. If the debtor countries fail to exercise their industrial effort in this direction, there would not be the economic wherewithal to repay War Debts.

But at What Cost?

If depreciation of currency and expansion of gold payments were to be thought of as necessary to clean the Augean stable, an observant reader has to notice at what cost he has to secure the desirable result. As Prof. T. E. Gregory says, "Inflation is a hell." Every economist says that an uncontrolled inflation is most damaging to the economic structure of society. The moment it is known that the United States of America is embarking on depreciated currency there might be flight of capital from the dollar, as they would lose by payment in depreciated currency. Depreciation of currency would decrease value of savings bank deposits, real property would rise in value and there would be a rush to sell bonds for investment in property and a financial panic might ensue. If any of these consequences were to be realised America will not realise her cherished objectives. Business with America has already become very difficult on account of uncertain dollar exchange conditions. It will become more so as a result of the fluctuating exchange values of the dollar.

The Inevitable Revaluation of the Dollar.

The abundance of labour supply in South Africa, the depressed commodity prices in the gold-producing countries, the opening of new mines in Australia, and the granting of bounty by Australia for increasing gold output to the extent of £80,904 will lead to increased output of gold sufficient enough to provide the wherewithal to finance three per cent annual increase of business. The gold stocks of the national banks have increased and the following table shows how their increasing stocks mean an additional base for an expanding credit structure.

(000,000 's gold stock)				
National Banks	1913-1914	1927	1930	1932
	£	£	£	£
Bank of England ...	40'1	152'4	148'3	120'6
Bank of France .	162'3	146'0	431'4	669'4
Bank of Belgium .	10'4	20'5	39'2	74'2
Russian State Bank .	159'8	19'0	51'2	67'5
U. S. A. (F. R. Banks)	95'2	561'7	604'4	648'0
British India Govt. ...	16'5	22'3	24'3	31'1

(See A. J. Liversidge—The Gold Movements of 1932).

Banker's Magazine, April, 1933.

The sanguine estimates of the Gold Delegation Committee have been upset by conventions prevailing in 1932. So a serious shortage of gold cannot indeed be a matter of certainty. Now that the bugbear of "gold strangulation" has disappeared the restoration of the managed gold standard can indeed be considered a most likely factor.

Granted that a gold standard can work in the future America has to revalue the dollar. Though Coughlin's proposal to "double the value of gold" has been discarded still the American eco-

nomists insist on $33\frac{1}{3}$ per cent increase in the value of gold.¹⁵ The gold sterling pound would be worth 4.53 dollars and England might be able or unable to maintain this value. But the paper sterling pound is fast galloping to this figure and the question of stabilisation of currencies can then be thought of.¹⁶ But the world gold store has to be redistributed and gold control of national gold stocks has to lie purely in the hands of the Central Banks of the nations. This revaluation or lightening of the value of money is needed. Old China did the self-same thing twenty-five centuries ago. History tends to repeat itself. Indeed we are forced to accept the truth of this adage with great reluctance.

¹⁵ The gold ounce which is now valued at Dol. 20.67 will be revalued at Dol. 27.67 per ounce.

¹⁶ Since the World Economic Conference has only determined to allow Great Britain to pursue her own national interests, the linking of sterling to the dollar or gold will not take place. The sterling area will expand and Canada will also join this bloc.

ANNOUNCEMENTS

THE INTERNATIONAL POPULATION UNION AND THE POPULATION PROBLEM IN INDIA

At the meeting of the Indian Economic Association held in Delhi last January, Dr. Radha Kamal Mukerji and Dr. B. N. Kaul were appointed a committee to report on the feasibility of starting a National Association for the Study of Population Problems, affiliated to the International Population Union. Population problems are of such vital importance to India, that such an organization could do exceedingly useful work. We have been requested to bring this proposal to the notice of economists, sociologists, medical men and others who are interested in population studies in different parts of India. All those interested in the possibilities of such an association, are asked to communicate with Dr. B. N. Kaul, who is now in England, and hopes to negotiate with the International Population Union the terms on which they would recognize and assist a National Association in India. His address up to 15th September will be

Dr. B. N. KAUL, Ph.D.
c/o THOMAS COOK AND SONS, LTD.,
BERKELEY STREET, PICCADILLY,
LONDON. W.1.

and after that

THE MUSLIM UNIVERSITY, ALIGARH.

THE MAYNARD GANGA RAM PRIZE

In 1925 the late Sir Ganga Ram, Kt., C.I.E., M.V.O., R.B., Lahore, with that generosity for which he was so well known, handed over to the Punjab Government a sum of Rs. 25,000 for the endowment of a prize of the value of Rs. 3,000 to be called the Maynard Ganga Ram Prize and to be awarded every three years, for a discovery, or an invention, or a new practical method which will tend to increase agricultural production in the Punjab on a paying basis. The competition is open to all throughout the world. Government servants are also eligible to compete for it.

Entries for the next award were invited by the 31st December, 1932. The response was, however, poor, and it has been decided by the Managing Committee of the prize that the award should be postponed for another year and that further entries should reach the Director of Agriculture, Punjab, Lahore, on or before the 31st December, 1933

INTERNATIONAL GEOGRAPHICAL UNION

INTERNATIONAL CONGRESS OF GEOGRAPHY IN WARSAW

August-September, 1934

FIRST CIRCULAR

At the last General Meeting of the International Geographical Union assembled in Paris in September 1931, it was unanimously resolved that the International Congress of 1934 is to be held in Warsaw. Consequently, the Polish Committee of the International Geographical Union has decided to convoke the Congress for the end of August 1934, and has appointed an Executive Committee, to which the organisation of the Congress has been entrusted.

Hereupon, the Executive Committee of the International Congress of Geography in 1934 requests you courteously to take part in the Warsaw Congress of Geography in autumn 1934. Below, please, you will find some informations relating to the programme and the fees of the Congress as well as its excursions.

(These can be had from us on application. MANAGING EDITOR, *Indian Journal of Economics*).

Those intending to participate in the assembly, and in the excursions as well, are kindly asked to inform the Secretariat of the Congress as soon as possible, in accordance with the particulars given below. All correspondence and enquiries should be addressed to the

SECRETARIAT OF THE INTERNATIONAL CONGRESS OF GEOGRAPHY,
HIGH SCHOOL OF COMMERCE ;

6, RAKOWIECKA STREET.

WARSAW, POLAND.

STANISLAW PAWLOWSKI
General Secretary

EUGENJUSZ ROMER
Chairman

of the Executive Committee.

NOTES

A NOTE ON THE ELASTICITY OF DEMAND CALCULATED FROM A DEMAND SCHEDULE OR FROM STATISTICS

I must first express my gratitude to Prof. A. K. Das-Gupta, for his article on the "Elasticities of Demand and Supply" in the April number of the *Indian Journal of Economics*. In that article he has raised the question of a formula for the elasticity of demand over the whole range between two points of the demand curve. He calls it "arc elasticity" to distinguish it from Marshall's formula, which gives the elasticity at a single point, and may be called point elasticity. Such a formula is very necessary for the teacher of economics, who wishes to make use of the concept of elasticity of demand in his classes, but cannot use Marshall's formula, because most of his class have not had calculus. If a demand curve is drawn Marshall's geometrical formula can be used, but this is of no use when a demand schedule is used for an arithmetical example.

Since reading Prof. Das-Gupta's article, I have tested several formulæ. The best appears to be the following :

$$(1) \quad e_A = - \frac{y_1 + y_2}{x_1 + x_2} \cdot \frac{x_1 - x_2}{y_1 - y_2}$$

where (x_1, y_1) and (x_2, y_2) are two points on the demand curve, or demand schedule, y_1, y_2 are prices, x_1, x_2 are quantities, and e_A is a rough arithmetical approximation of the average elasticity along an arc. If the demand curve is a straight line, e_A is equal to Marshall's elasticity of demand for the point $\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}$, which is the mid-point of the line between the two given points, for at this point

$$(2) \quad \frac{y}{x} = \frac{y_1 + y_2}{x_1 + x_2} \text{ and } \frac{dy}{dx} = \frac{y_1 - y_2}{x_1 - x_2}$$

for the line through these two points.

$$(3) \quad \therefore e_A = e_M = - \frac{y}{x} \frac{dx}{dy} \text{ which is Marshall's formula.}$$

If the demand curve is the curve of constant expenditure, (the equilateral hyperbola),

$$(4) \quad xy = c$$

We again find e_A equal to Marshall's elasticity, which in this case is constant and equal to unity, for

$$(5) \quad e_A = - \frac{y_1 + y_2}{x_1 + x_2} \cdot \frac{x_1 - x_2}{y_1 - y_2} = - \frac{\frac{c}{x_1} + \frac{c}{x_2}}{\frac{c}{x_1} - \frac{c}{x_2}} \cdot \frac{x_1 - x_2}{c - \frac{c}{x_1 x_2}}$$

$$= - \frac{\frac{c(x_2 + x_1)}{x_1 x_2}}{\frac{c(x_2 - x_1)}{x_1 x_2}} = + 1$$

The formula gives the correct result in both these cases for arcs of any length.

In the following schedules, the figures under "Price" represent units of money, those under "Demand" represent quantities of goods, such as seers or yards.

SCHEDULE I			SCHEDULE II		
Price y	Demand x	Elasticity $e_A = e_M$	Price y	Demand x	Elasticity $e_A = e_M$
24	0		8	105	...
21	10	7	7	120	1
18	20	3	6	140	1
15	30	$5/3$	5	168	1
12	40	1	4	210	1
9	50	$3/5$	3	280	1
6	60	$1/3$	2	420	1
3	70	$1/7$	1	840	1
0	80		$1/2$	1680	
Straight Line $y = 24 - 3x$			Hyperbola of Constant Expenditure $xy = 840$		

Note that in Schedule I, the elasticity for the point $x=30$, $y=15$ is $\frac{5}{3}$. This may be obtained by using the pair of points (20, 18) and (40, 12) or by using (10, 21) and (50, 9) or by using (0, 24) and (60, 6), since the point 30, 15 is the mid-point in all three cases. In Schedule II the same result is obtained whatever points are used.

In almost all other cases the value of e_A differs only slightly from Marshall's elasticity when the distance between the points is short, but this difference increases when the arc becomes longer, and especially as the curve approaches the axes. This is illustrated in Schedules III, IV, and V.

SCHEDULE III			
Price y	Demand x	Elasticity	
		e_A	e_M
6	100	$\left. \begin{array}{l} 2 - \frac{1}{61} \\ 2 - \frac{1}{41} \end{array} \right\}$	2
5	144		2
4	225	$\left. \begin{array}{l} 2 - \frac{1}{25} \\ 2 - \frac{1}{15} \end{array} \right\}$	2
3	400		2
2	900	$\left. \begin{array}{l} 2 - \frac{1}{9} \\ 2 - \frac{1}{5} \end{array} \right\}$	2
1	3600		2

Hyperbola (increasing expenditure) $x y^2 = 3600$

SCHEDULE IV			
Price y	Demand x	Elasticity	
		e_A	e_M
36	10		
25	12	$\frac{1}{2} + \frac{1}{242}$	$\frac{1}{2}$
16	15	$\frac{1}{2} + \frac{1}{152}$	$\frac{1}{2}$
9	20	$\frac{1}{2} + \frac{1}{8}$	$\frac{1}{2}$
4	30	$\frac{1}{2} + \frac{1}{50}$	$\frac{1}{2}$
1	60	$\frac{1}{2} + \frac{1}{8}$	$\frac{1}{2}$

Hyperbola (decreasing expenditure) $x^2 y = 3600$

SCHEDULE V

Price y	Demand x	Elasticity	
		e_A	e_M
10	10	$\frac{10}{3} = 6.33$	6.585
9	20	$\frac{17}{3} = 5.67$	5.892
8	40	$\frac{15}{3} = 5.00$	5.199
7	80	$\frac{13}{3} = 4.33$	4.505
6	160	$\frac{11}{3} = 3.67$	3.812
5	320	$\frac{9}{3} = 3.00$	3.119
4	640	$\frac{7}{3} = 2.33$	2.426
3	1280	$\frac{5}{3} = 1.67$	1.733
2	2560	$\frac{3}{3} = 1.00$	1.040
1	5120		

This is an exponential or logarithmic curve,

$$x = 10 \cdot 2^{10-y} \text{ or } y = 10 + \log_2 10 - \log_2 x.$$

$$e_A = \frac{2}{3}y \quad e_M = -\frac{y}{x} \frac{dx}{dy} = y \log_e 2 = 693y.$$

Expenditure is doubled when price falls by one unit, and increases until the price is below 2. Both measures of elasticity fall in proportion to price. Thus $e_M = 1.04 e_A$.

Another formula which may be used with good results is

$$(6) \quad e_G = -\sqrt{\frac{y_1 y_2}{x_1 x_2}} \cdot \frac{x_1 - x_2}{y_1 - y_2}$$

For example, in Schedule III, the worst value of e_A was $2 - 1/5 = 1.8$. Here $e_G = \frac{3}{2}\sqrt{2} = 2.121$. In Schedule IV where $e_A = 1/2 + 1/18 = .555$, $G_1 = \frac{1}{3}\sqrt{2} = .471$. In Schedule V where $e_A = 6.333$, $e_G = 3\sqrt{5} = 6.708$.

In all these cases e_G is nearer to e_M than e_A . In the case of the equal expenditure curve it gives the same perfect result, for when $xy=c$

$$(7) \quad \begin{aligned} e_G &= -\sqrt{\frac{y_1 y_2}{x_1 x_2}} \cdot \frac{x_1 - x_2}{y_1 - y_2} \\ &= -\sqrt{\frac{c^2}{x_1^2 x_2^2}} \cdot \frac{x_1 - x_2}{c(x_2 - x_1)} = 1. \end{aligned}$$

But in the case of the straight line it gives worse results, especially near the axes, and this appears to hold good for all curves which cross the axes. It is harder to calculate and less comprehensible to students who have not had much mathematics. But it may be used to check e_A especially as it frequently falls on the opposite side of the true value of e_M . Both these formulae are reversible in the sense that they remain unchanged when the subscripts, 1 and 2, are interchanged. But the formula for e_A is much easier to represent geometrically, for if the chord through

the two points be prolonged to meet the two axes at points Y and X respectively, and M be the mid-point of the chord, we have,

$$(8) \quad e_A = \frac{MX}{YM} = \frac{NX}{ON}$$

where N is the foot of the perpendicular dropped from M to the X-axis. For we have

$$(9) \quad \frac{y_1 + y_2}{x_1 + x_2} = \frac{NM}{ON}, \quad -\frac{x_1 - x_2}{y_1 - y_2} = \frac{NX}{NM}$$

$$e_A = \frac{NX}{NM} \cdot \frac{NM}{ON} = \frac{NX}{ON}$$

The formula suggested by Prof Das-Gupta is (using my lettering)

$$(10) \quad e_D = \frac{x_2 y_2}{x_1 y_1} = \frac{\text{expenditure at lower price}}{\text{expenditure at higher price}}$$

This really measures the ratio change in expenditure, as price falls, which is probably more important than the measures of elasticity. It is equal to unity whenever the elasticity of demand is unity, that is, when expenditure is a maximum. (In Schedule III, it equals the correct elasticity whenever $y_1 = 2y_2$. In Schedule IV it does so, when $y_1 = 4y_2$.) The concept of elasticity of demand has been used chiefly to distinguish between "commodities whose elasticity of demand is less than unity" and "commodities whose elasticity of demand is greater than unity." But that is the same as saying that the expenditure on the commodity is either decreasing or increasing as the price falls. It would be far less confusing to students, and much more clear to the businessman, if we were to say "a commodity on which expenditure tends to decrease as price falls, and to increase as price rises," or *vice versa*. But this description is even longer than the other. One is sorely tempted to coin a pair of mongrel words, and call these commodities "*deorex*" and "*increx*" commodities. But whatever we call them, it is surely the ratio change in expenditure, e_D , which is most important for economic theory and practice.

C. D. THOMPSON.

REVIEWS OF BOOKS

STATISTICS IN THEORY AND PRACTICE, by T. R. Connor, M.Sc., Bar-at-Law,
Sir Isaac Pitman & Sons., Ltd., London, 1932. Pp. 369. Price 12s. 6d.

Mr. T. R. Connor, the author of this book, is Farr Medallist in Statistics and a member of the Council of the Royal Statistical Society. As the title indicates, the book is divided into two parts, the first dealing with theory, the second with actual statistics as used by Government and business in practice. This is an excellent device for keeping the feet of young statisticians on the ground, and makes the book in some respects one of the best text-books in statistics I have seen.

The first part includes chapters on the organization of a statistical inquiry, statistical data, statistical measurement, tabulation, diagrams, graphs, frequency distributions, averages, dispersion, skewness, probability and error, sampling, correlation, index numbers, interpolation, graduation, and curve fitting. There is also a chapter on miscellaneous theorems which includes the Pareto Curve, the Lorenz Curve, and Association Correlation is confined to the linear correlation of two variables. For graduation only the formula changing the original data by $3/35$ of the fourth difference is given. Under curve-fitting, a parabola and a cubic are fitted by the method of least squares. But in every case problems dealing with actual statistics are worked out, and all of these are problems of interest to economists. Simple tests of the reliability of results are also given. The student is referred to other texts which will carry him further.

The second part gives a selection of current problems in which statistical methods are largely used, and shows just how these statistics are dealt with by government officials and businessmen. There are chapters on population, prices, wages, employment, profits, trade, finance, production, wealth, indices of business activity, business barometers, and business statistics. For example, in the chapter on wealth, the methods of estimating wealth by wages, by the census of production, by incomes, and by national property are given. Where the writer gives graphs of business activity, he also gives the figures on which they are based. This part will prove useful to the teacher of economic theory as well as to the class in statistics.

The book is to be especially commended for brevity and clarity. When one considers the great number of tables, graphs, worked out examples, and pictures of the Hollerith sorting and tabulating machines, it is remarkable what has been included in this medium-sized book. Its brevity will make it of great value to the student as a reference book after his course, and one may hope that the student will find it easy to continue statistical work of his own with its help. The great merit of the book is also its chief fault, for there are places where, though what is said is said clearly, so little is told, that the student will

hardly understand without help from his teacher. But once having understood, the book will tell him just what he needs to know.

Very few criticisms of detail need be made. It is surprising to find that the histogram is easier to smooth than the frequency-polygon, which is itself a first step in smoothing the histogram. The cross-weight index of prices is said to be reversible, but the student is not told that it fails to satisfy the circular test for three years. On the whole, the book is one of the best for beginners in statistics which has yet appeared.

C. D. THOMPSON

SOME BENGAL VILLAGES, edited by N. C. Bhattacharya and L. A. Natesan, Scottish Church College, Calcutta, with a Foreword by Sir Daniel Hamilton, Kt.; published by the Calcutta University, 1932. Pp 225.

The volume is dedicated to Rev. W. S. Urquhart, M.A., D.Litt, Principal, Scottish Church College, Calcutta, and Vice-Chancellor, Calcutta University. The Introduction consists of two chapters by the two editors on "Economic Surveys in India," and "Some Problems of Village Life in Bengal." Then follow seven village surveys by students of the College. After these, a model questionnaire, a glossary and an index of names are given. The price of the publication is not given anywhere.

A perusal of this publication in the friendliest mood leads to the unavoidable observation that the title of the book "SOME BENGAL VILLAGES" is misleading; for, there is very little specifically Bengalee about it. The second thought that comes uppermost in the mind of the reader is that no one concerned has bestowed sufficient attention on the publication—excepting the printer. The Foreword and the Introduction are general surveys of the rural economic problem in India of the class-room type, and the village surveys by the students are mostly superficial: they could not possibly be otherwise when asked to deal with diverse problems like disease, sanitation, irrigation, drainage and agriculture.

The Introduction quotes from the All-India Medical Conference to show how malaria is a preventible disease and how on the score of this disease, human energy worth several hundreds of crores is being annually lost to the country. Sir Daniel is quite unfair to the *Mahajan* when he says: "The masses have no money except the soul-and-body-destroying cash of the *mahajan*." The *mahajans* are too busy to notice seriously the total condemnation of their class like this! Continues Sir Daniel: "Replacement of the *mahajans'* cash by the people's own credit will clear the springs of India's life at their source, and her river of life will then run strong and clear." This is poetry rather than economics: will ever the time come when the capitalist will give place to "the people's own credit" to anything like a cognisable extent? If Co-operation has not achieved anything like this yet even in European countries, would it be reasonable to

prescribe this remedy at one stroke for India at the present juncture? Sir Daniel's ideal of the economist's province goes much further: says he, "The first business of the economist should be to clear the springs and issues of life so that the body politic may reach its maximum strength." If this be the economists' first business, one wonders which his other consequential businesses are! Scientific economic research can have nothing to do with such ideals.

Nor are the introductory chapters more encouraging. The data were collected in the villages in 1929, there are lengthy extracts and quotations from "INDIA IN 1926-27" and profuse use has been made of figures of the 1921 Census! The editors admit that "for obvious reasons an enquiry carried on by students during their vacation cannot be a detailed one," but one cannot understand why, in spite of the editors realising this, they hastened to give the surveys the sanctity of publication by the Calcutta University. Students must be encouraged. 'Yes, they must be, but not at the risk of spoiling the reputation or the standard of economic research in India. It means clearly that the editors belittle the importance of original, direct inquiry by competent hands. Slater's "Some South India Villages" was published over fourteen years ago, and it did deserve attention as a pioneering work; but, this does not mean that the book is worth emulation in 1932.

One wishes that sentences like the following had not been inserted in the volume: "Our villages are no longer the haunt of ancient peace as they used to be in the past. Far from being so, they are today the abode of disease, degeneration and death." Does Prof. Bhattacharya mean to say that in the past there used to be no deaths in Indian villages?

Prof. Natesan is no less poetic and idealistic: "The most important problem of the moment is to liberate agriculture from its degraded position and elevate it to the status of other industries . . . so as to offer an equally favourable field for the ambitious youths of the country." "What is needed is that the entire system must be changed before agriculture can hope to come to its own." Directors of Agriculture and the Imperial Council of Agricultural Research cannot but admit that they cannot understand the meaning of these passages. The TIMES OF INDIA said once that an ounce of practical work in the field of Indian economics was worth much more than a ton of theory, and certainly there can be no room for such sweeping root-and-branch dicta in a volume professing to deal with economic research.

The village surveys by the students arouse sympathy for them in the mind of the reader. Quite new to life as it is lived by the elder generation, with a questionnaire as wide as human life, these students were asked to go to the villages without any aid from the local bodies, local officials or even the professors themselves. One feels certain that if the editors had accompanied the students in the survey work, the surveys would have been much more useful, and the editors would have refrained from publishing them as they would have known the imperfections accompanying.

A few details from the report on Narkila, Sylhet, may be given to show the fact that rural economic inquiries are not easy matters. This village has 41 families and 186 souls. On this basis, the investigator helplessly writes that the average life of a villager is thirty years. Several of the "conclusions" are really amusing: "During the rains, the villagers drink the water of the river Chirka already referred to, and this water is at the root of such a wide prevalence of diarrhoea," . . . "Except three or four families, people do not wear very clean clothes." . . . "Condition of drainage system in the village is as unsatisfactory as anything. Indeed it is bad beyond description. . . ." "Housing condition of the village is not satisfactory."

Every attempt has been made to review the volume in as friendly a spirit as possible. The objective of the editors and the industry of the investigators are indeed praiseworthy, but satisfactory work requires much better equipment, organisation and accuracy and quantity of data. It is hoped that Professors Bhattacharya and Natesan and the surveyors will shortly present to the public another volume which will have profited from experience: as a first attempt, this volume does credit to the students of the Scottish Church College, Calcutta.

S K I

REPORT OF THE DIRECTOR OF THE INTERNATIONAL LABOUR OFFICE, Seventeenth Session, Geneva, 1933.

The Report of the Director of the I.L.O. for this year has been much reduced in size. Probably reasons of economy have made this inevitable. But while reduced in volume, the Report covers the usual ground with condensed directness. It may be pointed out that this is the first Report since Mr. H. D. Butler assumed the Directorship of the I.L.O. on the sudden death of his former illustrious chief, Monsieur Albert Thomas, who passed away on the 7th May, 1932.

The Report may very briefly be described on the one hand as a review of the World Depression with its social consequences, and on the other the efforts of the Organisation to mitigate these evils.

The key-note of the period that is covered by this Report, is still that of Depression. In fact in 1932, in certain ways, this Depression has been even greater than in previous years. For instance, the world values of the principal commodities, with the exception of coffee and petrol, continued to fall. Wheat prices in December 1932, fell to as low a level as they had ever been since the sixteenth century. The foreign trade of the world too continued to shrink. The production of consumers' goods, while showing some signs of recovery, again fell. Four more countries went off the Gold Standard. The cessation of international lending, which is one of the most serious features of the depression, did not improve, largely due to political apprehensions. The need for whole-hearted and extensive international world co-operation was emphasized by the

Preparatory Commission of the World Economic Conference, which, alas, has just ended in gloom and impotency.

The Social consequences of the Depression deserve special attention. Acute unemployment has continued for the third year in succession. Social security seems to have been destroyed. Compulsory unemployment insurance, which was first introduced in Great Britain, did not reckon the normal rate of unemployment to be more than 8.6 per cent of the industrial population. Unemployment insurance never contemplated to take care of one-quarter or one-third of the industrial population against destitution. Thus unemployment insurance has had to be supplemented on a vast scale by direct State aid. In this manner the 'right to live' if not "the right to work" has been much more firmly established in modern economic communities. All this has induced enormous national expenditures. It has meant the subsidization of enforced idleness. Questions have arisen, whether it would not be more worth while, from the individual as well as from the national points of view, if Governments subsidized active production, like the construction of roads, railways, housing schemes and the like. Public expenditure by providing wages would, amongst other things, also check depression.

Unemployment is still heavy in most countries. The proportion of workers out of work in Germany was 33 p.c., 32.1 p.c. in Austria, and 22.8 p.c. in Great Britain, while in non-compulsory countries, it was 42.8 p.c. in Denmark, 38 p.c. in Netherlands, 25.2 in Switzerland and 22.1 p.c. in Belgium, to take a few countries at random. In U.S.A., it was supposed to be 34 p.c. *

Apart from financial and fiscal causes, structural changes in industry and its geographical re-distribution, have been important factors in bringing about unemployment, especially in the other industrialized countries of Western Europe and the United States. The Institute for Konjunkturforschung gives very interesting figures for the annual rate of industrial expansion from 1913-'29 as follows:

Zone I	Industrial Europe (Austria, Belgium, Denmark, France, Germany, Great Britain, Norway, Netherlands, Saar, Sweden, Switzerland)	... + 1
Zone II	Agricultural Europe (Bulgaria, Finland, Greece, Hungary, Italy, Poland, Portugal, Rumania, Spain, Yugoslavia)	... + 2.2
Zone III	Highly capitalized Extra-European (United States, Japan)	... + 3.5
Zone IV	Moderately or newly capitalised Extra-European (Argentina, Australia, Brazil, Canada, Chile, India, Mexico, New Zealand, Peru, South Africa)	... + 3.6
Zone V	U.S.S.R. (to 1931)	... + 6.8

While in the long run this industrial expansion must be a beneficial development, in the transition period, however it has serious social consequences in

respect to countries more directly affected. Such change naturally endangers the standard of living of the workers of the older advanced countries and demands for tariff protection arise and become imperative. Hence minimum standards need to be determined and safeguarded, and consequently the I.L.O. is deeply and directly concerned in this subject.

One important point that the Report makes clear is the fact that while schemes of Rationalization in industry and mechanization in agriculture have greatly increased the productive efficiency per worker, these have not given to industry, as a whole, power of rapid reabsorption of the displaced workers. The time-lag between displacement and reabsorption has increased considerably, adding acuteness of suffering to vast groups of working class people involved. Mr. David Weintraub of the U.S.A. National Bureau of Economic Research has made some very interesting discoveries in the study of the rhythm of displacement and reabsorption in industry. This is what the Report has to say about this point

"Whereas on the average in each five-year period from 1899 to 1914 21 persons per 1,000 fell out of a given number of manufacturing industries, 119 additional persons to each thousand employed were taken on. Between 1923 and 1929, however, the average number who fell out of employment rose to 49 per thousand and the number taken on fell to 15 per thousand, not over a five year period but over a two year period. There was thus both a net deficit of employment and an accelerated rate of displacement."

What is true of America is also true of other countries.

The Report suggests that one of the fundamental methods of meeting this unprecedented unemployment, whether caused by cyclical, structural or technological reasons, would be by increasing the consumption-power of the masses. By so doing the equilibrium between production and consumption would be re-established.

This therefore leads to the question of wage. Wage cuts, though resorted to with less insistence, have nevertheless been universally utilized as one of the major methods of meeting the depression. A few figures given below will suffice to show the wage reduction that has been brought about:

INDEX NUMBERS OF NOMINAL WAGES BASE 1927=100

	1930	1932
Australia	99	88 (June)
Canada	105	97
Denmark	101	101
Germany	116	92 (Nov.)
Great Britain	98	95
Italy	100	86
U.S.A.	94	60 (Dec.)

While, of course, the fall in real income was not as great as in nominal wages, due to a general fall of prices, yet the total wages bill fell considerably due to the heavy amount of unemployment. For instance the purchasing power of the wage-earning population shrank by 48 p. c. in the United States, by 20 p. c. in Germany and by 19 p. c. in Italy, in Great Britain it shrank by 10 p. c.

This decline, however, has to be offset by the subsidies labouring classes have received through unemployment benefits of one kind or another.

The Report suggests that the cure lies not so much in curtailing output, as in increasing it, and adding to the wages bill. The Report puts it thus :

“ Clearly the only sure way of promoting trade revival is by increasing output and increasing the national wage bill. Until the workers as a whole are able to consume as freely as they did before the crisis, there is no solution in sight of the problem of declining prices, which induce declining output, which in turn induces increasing unemployment followed by still further shrinkage of purchasing power.”

In spite of this deflation of wages, there seems to be no reason to assume that the unemployment situation has thereby been eased off. Some of course maintain that wages cut have not been drastic enough. But such action, apart from being difficult, is at the same time, not so necessary. Human labour is fast being replaced by mechanical equipment, and so the wages bill is of diminishing importance in costs of production. In mining, labour cost is still the highest, representing from 60 to 70 p. c. of the total cost, while in the manufacture of margin wages represent only 3.6 p. c. Between these two extremes there is a wide variation in the proportion of costs, but in a great number of important industries, wages would represent about 30 p. c. of the total costs. Over-head charges are now growing in their importance. So economy, by wage-costs is no longer an effective method in reducing costs.

The Report very clearly believes in the efficacy of reflation rather than necessity of restoring the workers spending power and of enabling him to buy what agriculture and industry are able to produce in abundance. Just as unemployment breeds more unemployment so employment breeds more employment.”

The Report very clearly believes in the efficacy of reflation rather than deflation.

The question of social insurance is then examined. The influence of the depression on social insurance has been very marked. Contributions have fallen, resources of insurance institutions have been strained, and State assistance has been considerably curtailed. Strict economy is practised, supervision has become stringent, and benefits have been curtailed in amount and duration. The daily sickness benefits are less than half the workers' actual wages, and invalidity and old-age pensions in most countries are from 15 to 30 p. c. of annual earnings.

The whole scheme of social insurance is therefore under very grave danger. Should it break under the stress of the depression, it will deeply darken the future hopes of the coming generations of workers.

The Report after analysing the social consequences of the prevailing world depression, relates what has been achieved by the Office during the year. This is, as it were, the second main part of the report.

An increase in ratification of Conventions was noticed this year. The year was reckoned from 1st February, 1932 to 15th March, 1933. The figure reached this year was 50, which is the same as it was for 1925, but not as high as in 1929, when 77 ratifications were reported. Twenty-one nations sent in their reports, referring to twenty-one different Conventions. The marking of "heavy weights" received the largest number of adhesions. The Report also draws special attention to the whole-hearted co-operation it has received from the Spanish Republic. It also states that the work of the Organisation seems to be receiving growing recognition in Latin American countries.

Since the last Assembly, Turkey and Iraq have also joined the Organisation, and the former country has introduced a new Labour Code in consultation with the Office.

The Governing Body in April, 1932, set up a special Committee to look into the Over-seas grievances and devise means to remove them. It is contemplated to increase Over-seas representation. Mr. Weaver has been deputed to study at first hand the conditions prevailing in India, Iraq, Persia and Turkey. Other missions abroad are also being sent out. Sir Atul Chatterjee's election as Chairman of the Governing Body for this year has gone far to appease Over-seas claims. The rotation system in the election of the Chairman will also help to relieve a real grievance. The *I.L.O. Year-book, Studies in Social Insurance*, and the publication of *Industrial Conditions in Japan* deserve special notice.

Financially the Organisation in common with other institutions, has suffered much loss of income. Last year contributions covered only 85 p. c. of the budget. Drastic economies meant a saving of 6 p. c. of the budget. Staff charges represent 75 p. c. of the whole budget. The Report pleads for financial support if the efficacy of the Organisation is not to be crippled in a period when its services are most called for in the present world situation.

The resolution put forward by Mr. Jonhanx, representing the Workers' group, with the valuable amendments of Prof. O'Rahilly, was most important; for, in a sense, it was responsible for bringing about the World Economic Conference. Three members of the Governing Body, Dr. Weigert, Dr. Oersted and Mr. Jonhanx gave valuable help to the Committee of Experts in preparing the materials for discussion at the World Conference.

The Report comes to the conclusion that rationalization and consequent unemployment, forcefully point to the examination of the question of hours of work. The reduction of hours of work is no longer a social need, but an economic necessity. The purchasing power of the workers must be maintained, and this

can only be done by keeping them employed at full wages and at shorter hours. Wages are not now merely a matter of bargain between employer and employed, but are an essential matter in the sustenance of markets.

So it is to the solution of these new problems that the new Director of the Organisation, calls the attention of the industrial world. It is world collaboration in the matter, currency and credit regulation, tariff reductions, production programmes, public health activities, development of international works of importance, like electrification, construction of dwelling houses for the masses, and above all in the maintenance and improvement of the working men's 'standard' that the main help for the uplift of the Depression is indicated.

S. K. RUDRA

THE ART OF CENTRAL BANKING, by R. G. Hawtrey. Published by Longman, Green and Co., London. Pp. xii, and 164, Price 18s. net.

This is a collection of a number of essays dealing with the monetary problems of the Europe of today. The subject is introduced by two essays describing recent events, one on French Monetary Policy, and the other on the Wall Street speculation and the crisis of 1929. These provide an approach by raising problems of Central Banking in practical form.

The third essay is entitled Consumers' Income and Outlay. It gives the author's system of monetary analysis. In the fourth essay is given the art of Central Banking. The author has started with a description of the evolution of the art of central banking through the practices of the Bank of England in the art and then to an interpretation of recent events. In the theoretical exposition nineteenth century, and has then proceeded to a theoretical exposition of the the fundamental principle is the power of the Central Bank through its regulation of credit, to bring about what the author calls a "release of cash," or an "absorption of cash" and thereby to enlarge or to compress the consumers' income and outlay. It is through the exercise of that power that the Central bank discharges its responsibility as the source of money. One of the most important conclusions in regard to the art of central banking is that the power of a central bank ought to be used to prevent undue fluctuations in the price level. The essay entitled Money and Index Numbers is devoted to showing what meaning ought to be given to stability of the price level for the purpose of such measures.

The sixth and the seventh essays are a criticism of Mr. Keynes' Treatise on Money. After critically examining Mr. Keynes' views the author examines the proposals which Mr. Keynes made for modifying the technical practices of central banks. The concluding essay shows how intimately the various remedies for unemployment which come under discussion whenever business is depressed,

are related to the instrument of central banking and the enlargement and compression of the consumers' income and outlay

B. G. B.

ECONOMICS OF BANKING, TRADE AND FINANCE, by J. Stephenson and N. Branton. Sir Isaac Pitman & Sons, Ltd., 1933. Price 7s. 6d. Pp. 372.

The monetary reconstruction of the world soon after the War and the monetary crises in recent years have all been responsible for a good deal of literature dealing with the various different aspects of trade and finance. Of such literature, two examples of the most notable contribution to knowledge are the Macmillan Committee Report with volumes containing much valuable evidence and the Reports of the Gold Delegation of the League of Nations. But these and other works make lengthy reading in which an average reader is apt to lose his way. In the book under review an attempt is made by Messrs. Stephenson and Branton to provide within a small compass 'an accurate view of the system of trade and finance as it exists at the present day and to examine some of its outstanding problems.' In their treatment the authors have taken commendable care not to sacrifice exposition of the main principles to imparting a knowledge of contemporary events but have sought to elucidate general principles and illustrate their operation by reference to recent events.

The book has a fairly wide scope, it opens with an examination of the relationships between money and the general level of prices distinctions between different monetary standards and nature and significance of credit. There are useful chapters on the Money Market, Stock Exchange, Foreign Trade, Tariff Policy, Foreign Exchange, Financial Crises and Public Finance. As one reads through the book one cannot but be impressed by the judicious use the authors have made of current literature and one only wishes that the treatment were a little more exhaustive than it is. But the authors have well succeeded in avoiding controversial matter and providing an interesting presentation of some of the complex problems of money and finance. The book forms an excellent introduction to a further study of the subjects with which it deals.

L. C. J.

ESSAYS IN BIOGRAPHY, by John Maynard Keynes. Macmillan & Co., London, 1933. Pp. 318. Price 7s 6d net.

This volume is divided into two parts—*Sketches of Politicians* and *Lives of Economists*. The first part is taken up mainly with chapters on Mr. Lloyd George, Mr. Bonar Law, Lord Oxford and Mr. Winston Churchill; and the second part is concerned chiefly with lives of Robert Malthus, Alfred Marshall and F. Y. Edgeworth.

Most of the essays, the author tells us in the Preface, "are based on direct acquaintance." They were composed under the immediate impression of the characters described "and are offered to the reader (except in the case of the essay on Robert Malthus) as being of this nature—not written coolly, long afterwards, in the perspective of history."

It is the second part that is of chief interest to us especially because it contains "scattered commentary . . . on the history and progress of economic doctrine." As regards this characteristic, we might, in the first instance, note the divergent lines along which Malthus and Ricardo wanted to develop economic science—the divergent lines which are revealed by the correspondence—"the most important literary correspondence in the whole development of Political Economy"—between these two economists. Those lines the author indicates in the following words—"Ricardo is investigating the theory of the distribution of the produce in conditions of equilibrium, and Malthus is concerned with what determines the volume of output day by day in the real world. Malthus is dealing with the monetary economy in which we happen to live; Ricardo with the abstraction of a neutral money economy" (p. 138). But the Ricardian line of approach became dominant in the hundred years that followed and the Malthusian one was practically rejected. This the author says "has been a disaster to the progress of economics" (p. 141). "If only Malthus," he writes "instead of Ricardo, had been the parent stem from which nineteenth century economics proceeded, what a much wiser and richer place the world would be today" (p. 144).

Next, we might notice what the publication of Marshall's *Principles of Economics*, Vol. 1, meant in the realm of economic thought. "It is difficult," Mr. Keynes observes, "for those of us who have been brought up entirely under the influences of Marshall and his book to appreciate the position of the science in the long interregnum between Mill's *Principles of Political Economy* and Marshall's *Principles of Economics*, or to define just what difference was made by the publication of the latter" (pp. 221-22). But he defines the position very tersely when he says, "The New Political Economy had arrived, and the Old Political Economy, the dismal science, . . . had passed away," (p. 221) for Marshall laid "proper stress" on "the ethical element" and humanised the dismal science.

For reasons of space we would not give here the specific contributions of Marshall to economic doctrine and monetary theory so clearly set forth in the essay on him, but we cannot resist the temptation of quoting the qualities which, according to Mr. Keynes, a master economist must have, and the possession of many of which by Marshall was responsible for the success that he achieved. *Economics*, says Mr. Keynes, is "intellectually regarded, a very easy subject compared with the higher branches of philosophy and pure science. Yet good, or even competent, economists are the rarest of birds." Why? The answer is that "the master economist must possess a rare combination of gifts. He

must reach a high standard in several different directions and must combine talents not often found together. He must be mathematician, historian, statesman, philosopher—in some degree. He must understand symbols and speak in words. He must contemplate the particular in terms of the general, and touch abstract and concrete in the same flight of thought. He must study the present in the light of the past for the purposes of the future. No part of man's nature or his institutions must lie entirely outside his regard. He must be purposeful and disinterested in a simultaneous mood, as aloof and incorruptible as an artist, yet sometimes as near the earth as a politician."

G. D. K.

A MATHEMATICAL REFORMULATION OF THE GENERAL THEORY OF INTERNATIONAL TRADE,
by Prof. Theodore Otto Vntema. The University of Chicago Press, Chicago.
Price, \$2.50. Pp. xxii + 120.

Professor Vntema has produced a scholarly work on the theory of International trade. Of all the theories pertaining to the various departments of the science of Economics perhaps the most fascinating and probably the most confusing to the student of economics is the theory of international trade. The author has therefore chosen an important subject for his dissertation.

The theory of inter-state or international trade is not new. It has been treated and retreated by the classical and neo-classical writers; and yet it remains essentially unaltered. The reviewer, however, feels, as many economists must be feeling, that there is much in the theory that remains imperfectly understood, with the result that undue emphasis is usually laid on the difference between domestic and international trade. The main difference (we may say the only difference) in the theories governing these two types of trade is due to the prevalence of a greater degree of immobility of the factors of production in the case of trade between nations. For the sake of simplicity the theory of international trade, as any other theory, is worked out under a set of assumptions more or less true. The proper understanding of the implications of the theory therefore, depends on a clear realisation of these assumptions. The author's great service to the student of economics lies as much in the importance given to the limitations as in the careful manner in which he relaxes them in order to approach the problem in its more realistic aspect.

The treatment of the book is, from the point of view of the general reader, unfortunately too very mathematical to be easily intelligible. But the fault is rather of the subject-matter than of the author. Accuracy of treatment could not have been obtained by a less mathematical analysis. The author has not formulated a theory of international trade fundamentally different from the classical theory. The originality of the work can, therefore, consist only in the

detailed and painstaking mathematical analyses of the various problems connected with international trade.

The book contains six chapters. The second chapter deals with the general equilibrium equations. The problem of multiple countries and commodities is at once taken up and perplexing notations thus arise. Quantities X and Y are given three subscripts. The two important equations used are—(1) quantities exported equal quantities imported, and (2) the value of exports equals the value of imports. The author makes use of prices instead of sacrifice costs, and believes in the superiority of this method of approach to the problem of international trade. Were it not for the mathematical treatment adopted by the author we would have differed from this view.

In the third chapter the limitations of the second chapter are relaxed and the obstacles to trade caused by prohibitions, duties, bounties, transportation, costs, monetary changes and monopoly are recognised and adequately taken account of.

In the fourth chapter some of the problems of international trade are graphically explained. Here the treatment is not as rigorous as in the rest of the book. In the first place, only first degree equations (straight lines) are employed and, secondly, the demand supply equations of only one country are represented by lines and the *possible* amount of import or export is indicated with their help. The treatment is not erroneous in any sense but it is certainly less illuminating. The special, or as the author calls it, "exceptional," case of a negative sloped supply curve (decreasing cost curve) treated on page 42 is specially noteworthy, although it also suffers from the same drawback caused by considering the case of one country only.

In the appendix the second section on "Other Formulations of International Trade Theory" is interesting and should prove useful to all students.

J. K. M.

THE INTERNATIONAL YEARBOOK OF AGRICULTURAL STATISTICS.

The International Institute of Agriculture at Rome has recently published the 1931-32 edition of the "International Yearbook of Agricultural Statistics."

This volume of about 800 pages is the result of the most extensive and detailed inquiry made in the domain of international agricultural statistics and constitutes a work of the greatest importance to all those who are interested in questions having a direct or indirect relation to production and commerce of agricultural products.

In the first part of the Yearbook are classified the figures for area and population in the years nearest to 1927 and 1931 for 208 countries: the presentation of these figures throws light upon the world situation from the geographical, political and demographical points of view during the post-war period. The

second part is composed of a series of tables comprising for nearly fifty countries the available data concerning the uses for which the total area is employed, the apportionment of cultivated areas between the different crops, agricultural production, numbers of the different kinds of livestock and the products derived from them. In the tables constituting the third part of the volume, have been indicated for nearly 40 agricultural products, the area, production and yield per acre in each country during the five years 1923--27 and during each of the years from 1928 to 1931.

For each kind of livestock all available figures in the different countries have been grouped for the years 1927 to 1931. A large part of the volume is devoted to statistics of the commercial movement of 13 vegetable products and 13 products of animal origin. The figures published relate to the imports and exports during the calendar years and for the cereals also during the commercial seasons.

It may be added that the tables of production and commerce not only specify details for each country but also the totals for the different continents and hemispheres and for the whole world, allowing the formation of a general idea of the changes taking place during the periods under consideration in the area under each crop, quantities harvested and the commercial movement in each product.

The part devoted to prices contains the weekly quotations of 25 agricultural products on the principal world markets for the period January 1927 to July 1932. In the freights section will be found the quotations for the transport of wheat, maize and rice on the most important shipping routes, and in the section reserved for fertilizers and chemical products useful in agriculture are published statistics of production, trade, consumption and prices for 15 products. In the Appendix have been brought together special chapters on the distribution of agricultural holdings according to their size and mode of tenure. The Forestry Statistics have been extended and developed and will be published in a separate volume under the title of *International Yearbook of Forestry Statistics*.

PROFESSOR R. M. JOSHI, I.E.S.

IN MEMORIAM

It will be with a great sense of personal loss and grief that the readers of this Journal will receive the news of the passing away of Prof. R. M. Joshi. Even to those who were near him, his collapse was a great and painful surprise. For though he had been ailing for a long time, it was only last March that the Civil Surgeon had confidently advised him to resume his professional work. He did so in June. Yet, within nine days of his appearance in the College, he was called away from his earthly sphere.

Prof. Joshi had a brilliant career in Bombay University during which he distinguished himself as a student of languages, particularly Sanskrit. After a brief career as professor in the Fergusson College at Poona, Gujarat College at Ahmedabad and Sydenham College in Bombay he sailed to England for the study of Economics in London University. There also, he continued his record of excellent work, winning the Gladstone Memorial Prize for Economic Theory. After his return, he was again appointed Professor of Economics at the Sydenham College, Bombay.

He had outstanding qualities as a teacher and scholar. No one who came in contact with him could fail to observe that, whether in the field of economics, religion or any subject of general importance, he had very clear-cut and definite views. Moreover, he always pleaded them with a sincerity and earnestness which, even when provoking dissent, could not but win respect for the man and his ideals. As a teacher, he had in an unusual measure the gift of lucid, concise, and trenchant expression, which made him very popular indeed with the student world. His outlook on life was refreshingly optimistic, his most favourite text outside Economics being the Bhagavat Gita. His views on economic subjects had a definite nationalist bias—a quality rare in those who have accepted the limitations of Government Service. In private relations he was a generous and appreciative, if a somewhat sensitive, friend.

His small book on the Export Trade of India, and his published lectures entitled An Outline of Economic Theory, are models of writing clear, brief accurate, yet maintaining a sustained interest throughout. Though these give inadequate evidence of the real power and range of his mind, yet they make us wish

sincerely that we had more from his pen. He also wrote a number of articles in various Journals, among which may be mentioned, "The Place of Economics in the Educational Curriculum," "Central and Provincial Financial Relations," "A plea for the Reconstruction of the Financial Resources of the Provincial Governments and Local Authorities in British India," and "Division of Functions and Division of Resources in India," which appeared in the Indian Journal of Economics, the last two being read at the Mysore and Allahabad Conferences. His devoted and extremely efficient work as the Secretary of the Indian Economic Association for a long period does not need special advertisement to the readers of this Journal. He was a very enthusiastic member of the League of International Fellowship in Bombay—an evidence of his deep concern for the great causes of humanity. But the greatest and most permanent monument which he has left behind him is the oral tradition, which his many devoted pupils will no doubt pass on for years to come, even after his name has become a mere memory.

He leaves behind him a young widow and three children and a very large circle of friends, admirers, and students to mourn his untimely death.

S. K. M.

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PART II

THE TREND OF INTERNATIONAL TRADE

BY

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I

The decline of international trade has lately been causing grave anxiety. According to the latest statistics published by the League of Nations, the world's trade, measured in value, has declined by 65 per cent between 1929 and 1933. In other words, international trade is to-day only a third of what it was in 1929. The following table indicates the fall in the trade of 49 countries, representing nearly 90 per cent of the total of world trade:—

	Fall of Imports Percentage.	Fall of Exports Percentage.
1929 (First Quarter)	100	100
1930 ,,	92	89
1931 ,,	65	62
1932 ,,	43	41
1933 ,,	35	35

Indeed a certain part of this fall was due to the slump in prices, but the fall has not only been in the *value* of the world trade, but also in its *quantum*, as the following table will show:—

	Fall in <i>value</i> from the previous year.	Fall in <i>quantum</i> from the previous year.
1930	19%	7%
1931	28%	9%
1932 (first half)	34%	12%

It has been said that such a rapid decline in world trade is due to the rising tide of economic nationalism manifesting itself in high tariff walls, exchange restrictions, import quotas and other devices which have been resorted to for reducing imports in most countries. Indeed this is greatly true, but it is not enough to stop there. We have to probe deeper into the causes of such restrictions. What appear *prima facie* as hindrances to world trade are themselves, in another sense, an attempt on the part of world economy to transform itself into something more stable and equitable than the system which has functioned till now. This requires explanation.

II

At the close of the 19th century, world economy was based on a not very equitable division of labour between one part of the world which produced raw materials and the other part which turned them into finished goods. Roughly, the division was between Western Europe and the rest of the world. Certain regions in Western Europe and some in North America specialized in the large-scale manufacture of goods; and countries in Eastern Europe, Asia, Africa, and South America became the market for the sale of Western Europe's finished goods and for the purchase of raw materials and foodstuffs which were abundantly produced in those continents. Great Britain held the hegemony of the industrialized West, and not only did she become the factory of the world but

also managed the shipping, banking, insurance and foreign exchange for a good part of the world. As a result of the great profitableness of these occupations, wealth increased fast in Western Europe, and although it was not equitably distributed, it gradually filtered down to the masses, and in result, there arose in Western Europe, especially in England, a standard of comfort which till the War was the marvel of the whole world.

While thus the national dividend of the industrialized West was growing rapidly, the economic position of the rest of the world remained stationary, and its standard of living continued practically at the old low level. It is a well-known fact that the exchange of products between industrial and agricultural countries has been long going on at a loss to the latter. Even in the opinion of so cautious a statistician as Sir Josiah Stamp, "the world as a whole and over a given length of time has almost certainly been fed below cost price for the last 100 years if one takes into account the proper elements of cost,"* and this view has been supported by other equally competent students.

Indeed where agriculture has become capitalistic and on the large-scale—chiefly by the capital and enterprise of European settlers—there has been an increase of economic prosperity and a slight rise in the standard of comfort even of the native people around; but in India and China, which contain nearly half the world's population, small-scale agriculture and uneconomic holdings persisted and no appreciable economic improvement took place till quite recent times. The purchasing power of the Indian agriculturist can be judged by the fact that even in 1928, a year of high prices, his *per capita* income was computed at only Rs. 45 per annum.¹ In the same year, the average income of the American

* *World Agriculture—An International Survey* (1932), p. 260. See also the views of Sir Thomas Middleton, the Rt. Hon. Ormsby-Gore and others, pp. 255—59.

¹ *Indian Central Banking Committee Report*, p. 39.

agriculturist was about Rs. 900 and that of the American industrialist about Rs. 2,300 per annum.

The result is a disharmony of the most unfortunate type. On the one hand we have a highly efficient machine industry in the West, ready to produce tons and tons of goods at rapidly falling prices; on the other, we have the hungry masses of India and China and Africa who are unable to buy those goods even at falling prices, because their purchasing power is incredibly low. Recent achievements of machine industry in speed and efficiency have beaten all record, and to-day a single labourer with the help of an up-to-date machine can do work which even in the middle of the 19th century took thousands of labourers to carry out.² The limiting factor is therefore no longer production, but consumption. There has been a lag in purchasing power, a lag, which to-day offers a powerful resistance to the increase of production all over the world. Such a lag is perhaps inherent in the present system of industry and currency;³ but it has been aggravated by the type of world economy which prevailed till lately. The industrial countries went on accumulating capital, and continued to produce consumable goods of fine quality, but the agricultural countries, where dwell the bulk of the world's population, have not the wherewithal to purchase them, in spite of their moderate prices. The industrial nations did not realize the fact that their prosperity is dependent on the prosperity of the agricultural countries; and they went on perfecting the technique of production leaving consumption to automatic adjustment. Shrewd observers knew that a world economy based on such disparity cannot long function, and they predicted that the nemesis would pursue the steps of the industrialist when the impoverishment of the agriculturist would affect his selling powers.⁴

² Several astounding examples are found in Arkwright, *A. B. C. of Technocracy*; and Julian Huxley, *The Age of Planned Power*.

³ See in particular, P. W. Martin, *The Purchasing Power*.

⁴ Sir Josiah Stamp, quoted in *World Agriculture*, p. 260.

Such a nemesis has already arrived, and the world to-day is in its grip. World prices have slumped heavily; but the agricultural prices have slumped more heavily than non-agricultural prices. In the United States of America the prices of farm commodities have fallen by nearly 60 per cent from the level of 1929, but the prices of finished products have declined only by 24 per cent.⁵ Even before the trade depression, industries were faced with the stonewall of under-consumption in the populous agricultural countries; and now, with such wide disparity between the price of raw materials and finished goods, the agriculturist's purchasing power has shrunk by more than one-half; this means that his income would hardly suffice for fixed charges such as interest, rent and taxes, and that his purchases have to be very restricted. It is said that there is an over-production in several commodities, but when such over-production exists in a world where full three-fourths of the population are ill-fed and ill-clothed, it is clear that the real cause is the lag in purchasing power inherent in the present industrial system and in the present distribution of wealth between agricultural and industrial countries. Restriction of production cannot be the proper remedy for such a malaise; as Mr. Neville Chamberlain suggested, expansion of consumption would be the best solution, and consumption cannot be expanded when the world's total income is so unequally distributed between the different countries and economic groups.

We have thus come to a critical stage in the world's economic development. World economy, based on a haphazard division of labour between raw-material producing and manufacturing countries has been tried and found wanting. Agriculture has been the cinderella of world economy; it must do all the dirty jobs, but get a paltry remuneration for such work. Industry and trade obtained the bulk of the surplus, and they flourished for a time by an inequitable system of distribution, but this cannot go on for

⁵ The *U.S.A. Year Book of Agriculture* (1933), pp. 3, 4.

ever. It has brought about an economic collapse of unprecedented magnitude. The world cannot recover from this mess, unless the relationship between agriculture and industry is more equitably adjusted. Machine industry has worked wonders, but its progress is now seriously marred and the whole system of competitive industry is hanging in the balance.

To-day man knows the secret of producing all his requirements in large quantities and at small cost, and thus the gloomy forebodings of Malthus have been falsified. But the folly and greed of man stand in the way of all these achievements being used to maximum advantage. Any improvement of this state of things can only come by ushering in a planned system of world economy—one in which the world's dividend will be more equitably distributed between the manufacturing and industrial groups.

III

Indeed the immediate cause of the decline of world trade is the increase of tariffs, import quotas, exchange restrictions and other impediments to trade. These are all wicked devices indeed, but they came into being for the protection of national industries against the unfair competition of imports, especially from countries with bounty-fed industries and depreciated currencies. Under the protection of the tariff, 'new' countries in Europe and Asia sought to develop their 'infant' industries and the 'old' countries wanted to foster their 'key' industries. Even before the War, tariff walls were in existence, but they became much higher in the abnormal conditions during the War. Besides tariffs, there arose also requisitions, controls, priority systems, prohibitions of imports and exports, price fixation and government monopolies, all of which impeded the free movement of trade. After the War, there was a powerful wave of economic nationalism chiefly in the newly formed States of Europe, which have been busy developing their manufactures. At first, the tariffs were mostly imposed on finished goods, but subsequently raw materials and foodstuffs were also

included in the list in most European countries, as they feared that cheap imports from new lands would injure their agricultural interests.⁶ The situation was further aggravated by the abandonment of the gold standard in several countries in 1931, and then followed a frantic increase of tariffs all round, exchange restrictions, export and import quotas and other devices, which have cumulatively brought international trade to the present parlous condition.

Indeed tariffs are a very imperfect implement for protection; they burden the consumer, and create vested interests. Once a tariff is imposed, it would be extremely difficult to see it abolished, even after the circumstances which called for it have passed away. In a country like India where agriculture is the predominant occupation, it is easy to make the tariff a means of benefiting the well-to-do classes at the expense of the poorer sections of the community.

One may admit all this, but still one may not find the way clear for the immediate reduction of tariffs. Roughly the principal motives behind the recent increase of tariffs were revenue and protection. The Government of India obtains the bulk of its tax-revenue from customs duties, and unless a radical economy is effected, or some windfall comes into hand, one cannot see how this Government can reduce its tariff substantially in the near future. The protective tariff may be reduced to some extent, provided currencies of the countries that have abandoned the gold standard can be stabilized. Even if this is done, a good part of the protective tariff will remain in the case of those countries which are intent on protecting infant industries. Such protection of national industries can be justified by a number of powerful reasons, and it is too late in the day for economists to inveigh against it with arguments which found favour with their early Victorian predecessors. Even J. M. Keynes, who ten years ago considered Free Trade as based on indisputable fundamental truths,

⁶ *World Economic Survey* (1932), pp. 279-80.

has come to think that the advantages of the international division of labour are not comparable with what they once were. Indeed tariffs may not be, perhaps are not, the most effective and the least harmful means of fostering industrial development in 'new' countries. This is a matter on which each country must make up its mind, although some advice from international bodies might be helpful, especially at this juncture.

The nations assembled at the World Economic Conference, both in 1927 and in 1933, denounced tariffs, but they have so far done nothing beyond preaching a counsel of perfection. Tariffs cannot be abolished, cannot be even lowered substantially, unless (i) public expenditure in the different countries is rationalized, (ii) currencies are stabilized, and (iii) the industrial ambitions of the different nations are somehow reconciled. The last is extremely important, because if the conflicting industrial ambitions of the nations remain, protective tariffs will not be lowered. Lancashire, India and Japan are to-day competing for a dwindling world market in cotton textiles, and so long as this is going on, India, which has a growing cotton industry will have to impose a protective tariff or resort to some other less harmful device by which imports can be kept down. Indeed there are means for reconciling the interests of all the three countries and let us hope that it will soon be done. Similarly the ambitions of the different countries in important lines of production, both industrial and agricultural, must be examined and an attempt must be made to recondition the world economy on a new plan, locating each industry in such spots as are best suited for it and even indicating, if possible, the line of production and zone of marketing for each. Thus the economic equilibrium of the world can be restored by readjusting the relationship between the different groups of countries and of different economic groups, in such a manner as to maximize the world's total income and distribute it in the most equitable manner.

The World Economic Conference which has just concluded its

sittings has achieved practically nothing in this direction. It talked of tariff truce, currency stabilization and international agreements for restricting the production of some important commodities, but it has not come to any definite settlement on any of those issues. To talk of tariff truce without effecting currency stabilization would be futile; and it is out of the question to raise prices without pursuing these and other international lines of action. There are powerful vested interests to count with, and in particular there is the Roosevelt programme of internal economic action on which the United States has set its heart. Now that an international economic programme has failed, at any rate for the present, the alternatives will be a rampant economic nationalism, each country going its own way and scrambling for its markets as best as it could; or the formation of such groups as the gold bloc and sterling bloc, with powerful free-lances like the United States of America, Russia and Japan impeding the action of both. There are no signs of a peaceful settlement in the near future; economic autarchy seems to be the most powerful tendency, but an uncompromising autarchy may produce a clash which would shake world economy to its very foundations.

IV

The idea of economic nationalism has been growing from the latter part of the 19th century and has gained considerably in momentum during and after the War of 1914—18. Till about 1870, Great Britain had practically a monopoly in large-scale industry, but since then Germany, France and the United States succeeded in building up their own industries and they adopted, and in some ways adapted and improved, the methods of machine industry till then pursued by Britain. Thus those nations became formidable competitors of Britain and there set in a struggle for raw materials and for markets. Although those three countries

adopted machine industry, they did not allow themselves to become so predominantly dependent on industry and commerce as Britain; they took pains to apply scientific methods to agriculture and developed a more or less balanced economic system, in which agriculture, industry and trade found each a prominent place.

During the War, the United States and Japan made rapid strides in industrial development, but that has not disturbed the balance between agriculture and industry. In the case of the United States of America, in particular, economic self-sufficiency has been the predominant aim. The idea of autarchy has been pushed much further by Russia in the last few years; and a country formerly depending almost entirely on agriculture has rapidly developed an apparently efficient machine industry to balance its one-sided economic structure.

Various circumstances to-day favour the growth of self-sufficient national units. On the one hand, agricultural countries are vigorously developing their 'infant' industries; and on the other, industrial nations are exerting every nerve to grow more food within the country, for political as well as economic reasons. As machine industry goes on expanding in the 'new' lands, the market for the industrial products of Western Europe will become more and more circumscribed; and the greater the success of agricultural reconstruction in industrial lands, the smaller will be the future market for the raw materials and foodstuffs which hitherto came from Asia and America. As the *World Economic Survey* (1932) puts it in a striking passage: "The diffusion of manufacturing equipment and technical knowledge leading to industrial development in backward countries, together with the reluctance of powerful industrial creditor countries to sacrifice their agricultural industries in order to admit cheap foodstuffs, is leading to the gradual narrowing of markets for the great export surpluses of agricultural countries."

The stationary trend of population in Europe, and the increasing yield of agriculture per acre by the use of scientific methods tend to further weaken the demand for the staples of agricultural lands. In result, there is likely to be less dependence between the different groups of countries in future, and international trade may further decline.

In several ways, Great Britain is unfavourably placed for the adoption of a policy of self-sufficiency. The highly specialized industrial system which she has built up can flourish best under a policy of thorough-going free trade which would enable her to market her finished goods and purchase her raw materials and foodstuffs in the most profitable manner. Not only does her industry produce for the world market, but her efficient banking, shipping and financial systems supply the needs of a good part of the world. Nevertheless even Great Britain has recognized the changing conditions in the world's economic structure and has already launched on a readjusting of her economic system with the help of a tariff policy suited to her imperial position and commercial interests. The adoption of such a policy by Britain marks an epoch in the world's economic development. Thorough-going free trade is for the time being a thing of the past. Its advantages still remain, but when the rest of the world pursues a policy of arrant economic nationalism, not even the most powerful nation in the world can afford to maintain a purely free trade policy.

Perhaps this change is not altogether unfortunate. The older economists justified free trade on the ground that each country has an absolute or comparative advantage in the production of some commodity and that all countries would benefit by each sticking to its own line of production and exchanging goods with others, free of impediments. In pure theory, this is all right; and even now France would continue to produce wine and Ceylon tea, but when it comes to comparative advantage, the practical bearings are not quite so clear. It may be that Cuba now possesses

a comparative advantage in the production of sugar, but when the resources of India are tapped, it may be discovered that this country has a still higher comparative advantage. Is it then in the interests of the world to leave Cuban sugar a free play? Indeed it is the interest of the Cuban producers, but it may not be the interest of the world. Let the different parts of the world have an opportunity to develop themselves, and later when it is known which part has the highest comparative advantage, a system of free trade may emerge, and an international trade on a more equitable basis may come into being.

V

Thus a policy of economic autarchy is fast developing, and it is inevitable in the present circumstances; but few countries in the world have the means of transforming themselves into completely self-sufficing economic units. The World Economic Conference of 1927 gave a conditional recognition to the policy of self-sufficiency, but it was clearly stated that it was only justified where 'the size, natural resources, economic advantages and geographical situation of the country' warranted it. But such countries are very few. Hardly any State in Western Europe can establish such a claim. The United States and Russia are the two countries that have so far stood forth boldly for such a policy. Indeed the domestic trade of the United States of America is much larger than her foreign trade, and she exports only a much smaller proportion of her annual produce than, say Great Britain. She has also vast and diversified natural resources, and a growing population to work them and to serve as an expanding home market. With such facilities, she may develop a much fuller form of economic nationalism, but even she cannot be expected in the present circumstances to do without her export and import trade. It may be that exports are a very small proportion of her home production, but even that

little has to be exported, and if such exports cannot find a market outside the country, the price of the whole produce will be affected and that may dislocate the whole economic structure of the country. Further, American industry cannot flourish by mass production, unless there are widening markets outside. The growing creditor position of the United States of America is another important factor to be counted with. The great American Republic is now launching on a leap in the dark, and time alone will show how favourably her brilliant attempts at raising prices will react on herself and other countries.

India and China are in certain respects more self-sufficient already, but even they can ill-afford to neglect their foreign trade in the present circumstances. India exports less than 10 per cent of her total annual production. Half the world's rice crop is in India, but she exports very little of it; about 20 per cent of the world's sugarcane is in India and she exports no part of it. But she has got to export her jute and cotton and groundnut, and would suffer severe hardship if those are not exported. India needs an annual favourable balance for paying her external dues, and with a falling export trade as now, she has to repay her debts by exporting gold.

Even if complete self-sufficiency is not attained, several countries can easily succeed in making their economic system much more self-sufficient than it is to-day. Thereby, the older industrial countries will be deprived of their markets, and as it is not easy to readjust an industrial structure, great suffering may result from the growth of economic nationalism. "Countries whose population, equipment, railways and ports have come into being for the purpose of meeting the needs of others will lose their *raison d'être* and their people must face the prospect of unemployment and a prolonged depression of the standard of living."⁸ It may be that some of those countries have less right to an industry than their

competitors, but all the same such a sudden change is likely to produce great hardship. Such far-reaching changes in the world economic structure must come as a gradual re-adjustment and not as a revolutionary expropriation.

In these circumstances, an international effort is essential to reconcile the industrial ambitions of the different nations and to decide on the lines of readjustment, and on the *pace* of readjustment, of the industrial areas which are to-day imperilled by the onrush of economic nationalism in other lands. But it does not seem likely that such a readjustment would take place by world agreement to which all nations are parties; at any rate, the experience of the recent world conferences does not give room for optimism. In the absence of such international action, the countries interested must themselves enter into bi-lateral or multi-lateral agreements, with a view to safeguarding their several interests. By such mutual agreements a gradual readjustment can be carried out, spread over a series of years. They may agree on their respective lines of production and markets, and having agreed on these, tariffs between them may be lowered or even abolished, if revenue considerations permit. Trade between them may be placed on a well-adjusted quota system. Several such agreements may gradually create a planned world economy, however crude it may be. In the present circumstances, wisdom seems to lie in such a line of action.

This is what Britain has already done. At Ottawa she entered into agreements with the Dominions and India for mutual advantage. Subsequently, she also entered into agreements with Germany, Norway, Sweden, Denmark and Argentina. It is not yet time to pass judgment on those agreements, but so far as the inter-imperial agreements are concerned, it would appear that they have stayed the decline of trade and have established sheltered markets within the Empire for several commodities, for which the external demand is fast declining. India has so far entered into agreement with only her largest single customer; it will soon

become necessary to enter into agreements with her other principal customers also, in particular Japan. The proper working of these agreements depends upon a number of factors, and from time to time their usefulness will have to be tested by results. In the present state of world trade and India's balance of trade, this country must exert every nerve to secure sheltered markets, wherever she may obtain them.

VI

In view of the foregoing circumstances, he is too optimistic indeed who looks forward to an early restoration of international trade to the old level. The greater the industrial development of the new countries, the more self-sufficing will they become and to that extent world trade is bound to shrink. According to the statistics published by the League of Nations, only a smaller proportion (than formerly) of the goods produced enters into international trade. The world index of production has fallen, but the index of trade has fallen more steeply. The following table will bring it out:—

	Average of		
	1925-29.	1930.	1931
<i>World Trade :</i>			
Value of world trade	100	84.5	60
Quantum of world trade	100	101.5	74
<i>World production :</i>			
Foodstuffs	100	101	99
Raw materials	100	101	91
Industrial production	100	97	84

That this tendency of international trade to decline is bound to continue is also indicated by other signs. The birth-rate in Europe is still falling, and as the yield from agriculture is growing, there is little likelihood of any great increase in the demand for foodstuffs in Europe. Nor is it likely that the transport of bulky raw material will be so important in future as it had been in the past, when such transport was rendered easy by coal shipments as return cargo. No wonder that the number of 'tramp' steamers is dwindling. It is well-known that the liners are fast replacing tramps in international trade.

Although this is the immediate outlook, it does not follow that the days of international trade are gone for ever. When the backward countries get economically developed, their purchasing power will grow and this is bound to produce an increasing demand for goods, both domestic and foreign. China and India, therefore, hold the key to world recovery. If their teeming masses obtain double their present income—and this is by no means impossible—what a difference would it make to world trade? In a well-adjusted system of world economy, wherein the present disparity between agricultural and industrial countries will vanish, international trade is bound to be much larger than it is to-day, and free trade will have a chance of being given an honest trial.

Shrewd businessmen abroad have already visualized the possibilities for Western industry by increased purchasing power in Asiatic countries. Henry Ford was asked recently at a dinner what he thought would be the best cure for the trade depression, and in reply he wrote on his table-cloth, with a lead pencil, the numbers 160, 300, 400. The multi-millionaire meant thereby that the future depended on increased consumption by the 860 million people inhabiting Russia, India, and China. In his view, this would give machine industry another wave of prosperity. Viewed in this light, the economic problem of India is not merely an Indian problem, but a world problem, perhaps one of the greatest problems now facing world economy.

VII

The following conclusions arise from the above survey:—

1. The recent decline in world trade is an inevitable result of the old ill-adjusted world economy, in which agricultural countries obtained too small a share of the world's total income.

2. The rise of economic nationalism has been the immediate cause of the fall of world trade, but economic nationalism has risen greatly as an unconscious effort on the part of world economy to re-adjust itself on a more equitable basis.

3. Economic nationalism has led to agricultural countries getting more and more industrialized and industrial countries conserving their agricultural resources; therefore the *raison d'être* of international exchange is getting weakened.

4. Self-sufficiency is to-day the aim of several countries, but while a greater self-sufficiency than at present may be inevitable, it does not seem advantageous for any country to aim at complete self-sufficiency.

5. The rapid industrialization of new lands would involve a violent expropriation of old-established industries, and this will cause acute unemployment and distress. This can best be avoided by a world agreement in regard to industries and markets. This ought to be the aim of a World Economic Conference which means business.

6. As a world plan is not immediately practicable, the competing countries may enter into agreements specifying the lines of production (and markets) of each. Between them, tariffs may be lowered or even abolished, and trade may function on the basis of quotas. Such agreements may eventually bring about a reconditioning of world economy.

7. In this light, the Ottawa agreements, and the other agreements recently made by Great Britain with non-Empire countries,

are in the right direction. If such agreements do not work well, they may be modified by experience.

8. The present trend of international trade points to a continued decline, but when world economy is equitably re-adjusted, world demand will grow and this will lead to a revival of international trade, larger in magnitude and superior in quality, than in the past.

POPULATION PRESSURE AND THE MIGRATION PROBLEM IN ASIA

BY

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(Continued from the July issue)

Indian Density and Emigration Statistics.

The effect of the pressure of population has its direct influence also on emigration. The first and most obvious indication of a surplus population is the density per square mile. It is not, of course, an absolute criterion, since density in India depends primarily on the amount and regularity of the rainfall and the consequent fertility of the soil. Certain districts in Eastern Bengal are able to support an enormous population to the square mile without resort to emigration, and that population is steadily increasing. Many rural areas here exhibit a density ranging from 1,500 to 3,000 persons per square mile which is maintained by a well-arranged succession of crops and vegetables and by orchards without any symptom of economic pressure. Leaving the Ganges Valley where the percentage of cultivated to cultivable area has risen to the phenomenal figures of 85 to 90 in some tracts, fallow and waste lands in other parts of India are gradually coming under the plough. Reclamation is proceeding apace in Assam, Burma and the Central Provinces. To the first two provinces, as yet inadequately exploited, has poured annually thousands of immigrants from Bengal, Bihar and Orissa and the United Provinces. In 1931 about 1½ million persons were found in Assam born outside the province. Similarly in Burma another million of the Indians are to be found. This has meant a gradual reclamation and settlement of churs, jungles and swamps.

An analysis of the total food production and of the normal current consumption in India has shown that during the decade

1910—20 Indian food on an average fell below her normal requirements by 10 million tons.¹ For the present consumption the human population of 352 millions and the animal population of 151 millions would require 103 million tons of food grains and other food, taking into account seed and wastage. The average present deficiency will be about 10 million tons. Of course we are not taking into account the sudden shortage of food production in years of agricultural scarcity which are found to recur in Northern India at intervals of six years.

A very large part of the Ganges Valley is in a state of over-population and there is serious maladjustment of human numbers to food supply. Over much of this area there cannot be any release of the pressure of population from intensification of agriculture and increase of irrigation, which have almost reached their limits. The population thus cannot improve its standard of living and having reached a stage of saturation in some areas in 1901 is now showing absolute decrease. A close study of population trends in some agricultural districts in the Ganges Valley for the last 50 years has shown that the mortality curve tends to follow the curve of food supply and the natality curve but in an inverse sense to both and that both natality and mortality are gradually declining. It thus appears that though the threat of actual starvation or famine is always there, there is an indirect adjustment of density to food supply through the trend of the survival rate, the equilibrium density being maintained below a point at which famine sweeps away human numbers. But this equilibrium density is far different from the optimum density which should be the object and goal of social policy.²

¹ Mukerjee : *Land Problems of India*, p. 288.

² Mukerjee : Optimum and Over-population in the *Indian Journal of Economics*, January, 1930; Population, Balance and Optimum—International Congress for Studies Regarding Population Problems, Rome; also The Criterion of Optimum Population, *American Journal of Sociology*, 1933.

On the other hand, the sparsely populated highlands of Chota Nagpur and the Central Provinces supply most of the emigrants to Assam. But the rule that a high density indicates surplus population generally holds good for the United Provinces. The following table shows the number of emigrants that sailed from Calcutta to various British Colonies between 1901 and 1910 and between 1910 and 1917 after which indentured emigration ceased. Only those districts are mentioned where the emigrants numbered more than a thousand in either of these periods.

District	Density of Population	Number of Emigrants	
	1921	1901—10	1911—17
Mirzapur	165	1,051	...
Bahraich	402	3,522	1,579
Unao	458	1,388	..
Cawnpore	485	1,575	..
Allahabad	491	3,163	1,282
Agra	498	1,469	...
Gonda	524	14,499	4,521
Barabanki	585	1,597	1,153
Rae Bareli	586	2,070	1,753
Sultanpur	586	4,572	1,446
Partabgarh	592	2,588	...
Ghazipur	597	2,409	...
Fyzabad	676	7,433	1,895
Basti	687	31,173	7,467
Azamgarh	690	4,209	...
Gorakhpur	721	5,703	1,857
Jaunpur	745	3,007	...
Lucknow	749	1,070	...
Benares	898	1,586	...

The number of emigrants to various British Colonies from the different districts numbered 128,513 in 1911 and 41,248 between 1911 and 1917. In the decade 1921—1931 the emigration was

much reduced and overseas emigration was negligible. 100 in 1923 and 107 in 1929 emigrated to Mauritius. In addition 642 persons who were born in this province and had returned from foreign countries re-emigrated to Mauritius. The emigration from Bihar and Orissa to the colonies was never on a large scale. Only 3,461 persons emigrated between 1910 and 1921, the number having fallen steadily from 920 in 1911 to nil in 1918. Many of these emigrants seek industrial employment in Bengal in the Jute Mills in particular and as day-labourers and coolies.

But there is no doubt that emigration which has dried up will receive a fresh impetus as soon as any harvests shrink. The United Provinces added 4 million and Bihar and Orissa added another 4 million extra mouths to feed between 1921 and 1931; while the proportion of the total area under cultivation was slightly reduced, and the yield per acre did not increase to any extent by new and improved methods of exploitation in both the provinces.

In India the growing factory industries may absorb some of the emigrant labour. But this is not possible for Japan, who therefore must seek migratory outlets for her surplus population. Japan is therefore in greater need than India of industrial change and emigration.

Defence of the Exclusive Policy and a Rejoinder.

It is urged in favour of the exclusive policy that peoples who multiply more rapidly than others should feel the consequence in their own countries, and if they are allowed free access they will lower the standard of living. The argument is as follows:

“There is no doubt that barriers to immigration will be reared which will give notice to the backward peoples that enlightened humanity is not willing to cramp itself in order that these peoples may continue to indulge in thoughtless reproduction. Let a people make itself miserable by multiplying like an animal not endowed with foresight and reason, but why should this people expect other peoples to allow themselves to be made miserable in

order to accommodate its overflow?³ The menace of colour is as much a scaremonger's phantasy as the common notion of the thoughtless reproduction in China, India and Japan is fallacious. The oriental countries are no doubt increasing in population, but the rates of increase are falling. China's decennial rate of increase is smaller than that of Germany, France and Italy while India's rate is smaller than that of these countries and of Holland, Spain, Russia, and most of the countries in Eastern Europe. Japan which among the Oriental countries, is increasing fastest shows a smaller rate than the United States, Canada, Australia, New Zealand and most of the South American countries.

Decennial Rate of Increase, per cent 1920—1930.

China	5.6	Canada	18.0
India	14.16	Australia	19.7
Japan	9.40	New Zealand	19.8
Germany	7.8	Mexico	16.6
France	6.7	Brazil	35.4
Italy	6.5	Argentina	30.8
U. S. America	16.1	Chile	14.9
Bolivia			32.5

Again, Japan's fast multiplication is connected with the opening phase of industrialism through which she is now passing, and her birth-rate is bound to slacken as in the industrial countries of the West which followed up a storm of breeding with reproductive arrest. The increase of urbanisation, the rise of the marriage age, the diminution of the size of family and the programme of birth-control all testify to a new trend in population growth in Japan. Secondly, the argument of the distinguished American sociologist might have held good if the Northern races would have confined themselves to their own territories and had not developed a social and industrial living which can be maintained now only on the exploitation of the resources and products of the tropical

and sub-tropical regions. In fact the high standard of comfort of 'enlightened humanity' has been achieved only as a result of European expansion in Africa, Asia and Australasia. The Northern races have not only gone to the tropics where they cannot thrive and where all the available human and natural forces are now being employed for the production of their luxuries and comforts, but they have also kept large tropical lands empty lest the admittance of coloured races who can develop their resources should affect the future of the exotic white civilisations. Australia has no doubt a European working class which maintains a high standard of living, but this class is too small and is quite unsuitable for the peopling and utilisation of the empty spaces in the north and interior of the continent. As a matter of fact the tendency is for the European working population to be concentrated in a few great cities whose aggregate population comprises half the total population of Australia. In South Africa, on the other hand, the European working class suffers in competition with the natives and Asiatic immigrants because of its higher standard of living. If the European is gradually but inevitably pushed out from the fields of labour by the Bantus and Asiatics, a white oligarchy employing coloured labour is less feasible in course of time than the supremacy of the coloured communities which would ultimately determine the status of the Northern settlers.

Low Standard of Living an Economic Advantage.

The standard of living is a matter of adjustment of stock and climate, and the thoroughbreds of the soil who can work and thrive more successfully than the exotics on a lower standard of living, have an economic advantage over the Northern races which their political supremacy cannot in the long run resist. In free economic competition where political authority is not wielded as an economic weapon the native races or emigrants from tropical and sub-tropical regions have, indeed, a hereditary advantage over the white settlers in their lower standard of living, which represents

the physiological response to the region socially accepted. The Northern peoples, accustomed to a colder climate, which needs a larger amount of protein consumption and more of carbo-hydrates, fats and oils not required in the warm region develop in these areas a standard of living which will be in some measure artificial.

Comparative Investigations in the Basal and Minimal Metabolism.

The average basal metabolism of the Indians, Chinese and the Japanese has been found to be 5 to 15 per cent below the English and American standards. In China, Earle found that the basal metabolic rate of the Chinese is on the average 8 per cent lower than the western standard. Takahira found that the Japanese metabolism is lower by 5.7 per cent. In India, the metabolism of healthy men has been observed to average 12 to 13.3 per cent below the western standard. Such lower basal and minimal metabolism of the Oriental has a true physiological basis which cannot be explained in terms of size, age and sex. Both climatic and dietetic factors produce their effects through the internal secretions and nervous organisation, and the lower metabolism becomes a part of the racial make-up. Among the Orientals themselves the average metabolism of the Japanese is higher than that of the Chinese, especially of the Southern Chinese, and the metabolism of the Chinese higher than that of the Indians especially of the Bengalees. The following results have also been reached by recent laboratory investigations of metabolic rate and diet in the United Provinces.

		Basal metabolism.	
		Calories	Diet.
British Working man	...	1,700	3,500
Indian peasant	...	1,200	2,400

It is clear that the food requirement is about 30 per cent lower in India than in Great Britain. Indeed, the Indians, Chinese or Japanese can work in warm regions sanely and economically with a much smaller consumption of fats and carbo-hydrates, needing

almost 30 per cent less in the caloric value of their diets. The smaller average weight of the Eastern worker is also an advantage in his favour as regards his food necessities. Custom indeed gives eastern diets much less nitrogen than the Western worker consumes, from 50 to 70 per cent less. Further, it is found that the Eastern worker has probably a greater degree of relaxation during rest than has the Western worker. This is attributed to the latter's nervous tension on account of which he finds complete repose only during sleep. Lastly, high temperature and especially high humidity not merely reduce the basal metabolic rate and hence the food requirement of the Eastern workers but also the expenditure on clothing. Professor Morimoto estimates that the Japanese may be fairly expected to consume only 80 per cent of what a Western worker consumes,⁴ while his clothing requirement would be at least 50 per cent less. The Easterner's vegetarian diet is not only connected with his lower resting metabolism and nitrogen requirement but also with the fact that in an old and densely peopled country where the competition of animals with man for utilizable foods is more keenly felt meat and beef must be considered extravagant forms of food with reference to the quality of vegetable food required to produce it. No doubt less food, especially less protein, less clothing and less fuel are quite compatible with high production efficiency of the peoples of the warm regions.

Physiological Advantages of Orientals in the Tropics.

Like the vegetarian diet associated with a lower basal metabolism and nitrogenous exchange the Oriental's pigment constitutes an advantage in the struggle against the continuous sunshine in the tropics, which the white man lacks. The Asiatic with his automatic regulation of heat production and low protein consumption can perform hard labour (as measured by oxygen consumption)

⁴ Mukerjee : Food and Food Requirements of the Indian Labourers, *Indian Journal of Economics*, January 1932.

more economically and with less fatigue than the Westerner in the wet tropics. His dark skin arrests more thoroughly the actinic rays which have unfavourable chemical effects not yet understood. Once the temperature of the external air rises to 98.4°F., the organism can thereafter no longer lose heat to its environment by convection and radiation; it can only lose heat by the evaporation of some of its water either through sweat glands as in man or by the respiration passages as in the dog, or by both. The individual with the higher basal metabolism and body weight requires as a result to evaporate more water than the man with the lower. Below 100° in the shade the light textured skin of the black or brown man has an advantage because of the smaller distance heat has to travel from the inside to the outside. At that temperature or beyond it sweating is the only source of heat loss. The lower basal metabolism and the lower body weight of the lightly built inhabitant of the tropics give him less heat to lose than the differing European. Consequently the former has less need of sweating and so also of water intake than the latter. Both the brown and dark races have more sweat glands than Europeans. It also appears that in their case a hemodilution takes place and the water of the muscles is drawn upon in large amount to supply the water for perspiration. Thus the Oriental can do manual work out of doors and also reap the full benefit of the cooling power of the air. There is similarly a physiological adjustment in respiration, blood digestion and kidney secretion.⁵ Tropical peoples show a decrease in the rate and volume of respiration. The blood "fat" is as a rule smaller in the tropics. The secretion of bile is smaller in the tropics even if the food intake remains considerable; while the urinary excretion is also diminished. There is lower urea and chloride content in the urine which results from the partial excretion of these substances in the sweat, but an increase in the ammonia excretion in tropical man. The tropical climate, at least

⁵ Balfour: *The Lancet*, Vol. 205, 1923. quoted in Trewartha—*Acclimatisation in the Wet Tropics*, *Geographical Review*, July 1926.

for mice, lessens the demand for thyroid hormone in the body, but the drop in basal metabolism has a direct bearing on the internal secretions. Balfour speaks of the "weedy" European children in the tropics. Greater generative vigour is present in both sexes but excessive sexual indulgence is more likely to result in exhaustion and neurasthenia. Neurasthenia which is the most frequent complaint of the European in the tropics is often the outcome of tropical heat, continuous sunshine and humidity and represents a "complex of systems produced by nerve exhaustion, and associated with, if not causing, an alteration in bodily nutrition. It does not directly kill the patient, but through weakening of his will power, sapping his energy and creating an emotional condition of irritability and depression it makes him unfit for strenuous work," observes a famous Surgeon of the Calcutta Medical College.

The Oriental's frugality in respect to food and drink and his greater immunity to tropical heat, and humidity are accordingly associated with a greater output of outdoor labour. His lower standard of living may cause fatalism but this may fit him better for his actual task under such environmental conditions.

Normal Migration of Agriculture and Population Types to Similar Climatic Regions.

Human spatial and food relations as conditioned by the environment migrate to appropriate natural areas. Plant and animal ecologists have made us familiar with the concepts of distribution, invasion, and succession. Crops, agricultural and irrigation practices, methods of field distribution and village settlement invade similar ecological areas; and a population group with adaptive farming methods becomes more successful in similar climatic regions inhabited by others with an inferior culture and standard of living. Succession thus involves a complete change in the form of exploitation and in the type of population group. Through the interplay of the forces of competition, invasion, and succession there is a natural selection of varieties of crops and domesticated

stocks, methods of cultivation, types of human settlement, dietaries and standards of living in particular ecological areas. These are active agents in the selection and distribution of population types. The variety of food plants and of animals and the manifold uses to which these may be put by man's growing intelligence and experience govern materially the economic method and the social life of the communities concerned. The cumulative effects of climate, food and type of labour evolve the population type which can best utilize the resources of the region. The food and the standard of living are adapted to climate and ecological resources. There is established a socio-physiological balance between man's normal output and expenditure of energy and the natural store of energy he draws upon. It is this balance which is the sure guarantee of the permanence of man's settlement and civilisation in a region, whether homeland or colony, whether natural or man-made.

The problem of distribution of the world's surplus populations can be thus reached on scientific lines through the adoption of the principle of adaptive assimilation. The importation of very dissimilar strains, whether of plants or of animals and humans leads to instability and degeneration. Conversely, plants, animals or stocks imported from similar climatic regions contribute successfully towards agricultural reconstruction. Plant explorers are now scouring all possible corners of the world in search of economic plants particularly adapted to particular purposes and lands. This applies also to some extent to the introduction of new varieties of insects and animals. The adjustment of population to resources in the world is similarly governed in large measure by the strong tendency for populations when faced with a limited food supply in the homelands to migrate to similar climatic regions where they meet with familiar conditions. To such new regions they bring adaptive crops and animals, agricultural methods and practices. Their food and standard of living are also adjusted to similar climatic conditions. It is in the new regions that they

find space for moral expansion and optimum living conditions. Successful colonisation implies a larger average expectation of life than in the homelands, where over-population leads to a slackening of birth-rate and an increase in mortality and keeps down both the survival rate and the average longevity. No doubt the Chinese in Indo-China and the Dutch East Indies and the Indians in Ceylon and Natal, have shown a sudden increase in population and a rise in the standard of living as they have acquired freedom and opportunity to exercise in an ampler environment the very qualities to which their progress had been due. The rapid spread of new plants and animals introduced into similar climatic regions and their increase in individual size and vigour are familiar phenomena. Human migration to "quite another world" similarly means the spur of change and the removal in part of the hampering web of tradition. The occupation of a virgin land and the carving out of new territories means opportunities and elbow room for new growth and a more energetic outlook, and with a people, like the Chinese and the Indians, a blow to their psychology of drift and despair. The Indians in such colonies as British Guiana, South Africa and Fiji, for instance, are remarkably free from the rigours of the caste and unreasonable social and religious practices which obtain in India. There is gain in both multiplication and in self-confidence and self-expression which have won the respect of the natives in those colonies. These are attributed to the lessening of the stringency of natural selection in the new environment. Thus oriental emigration means racial revival as well as economic health.⁶ There is no cause of alarm about this. On the other hand, white men under the climatic handicaps of the tropics have shown not only a lower longevity but also a terrible nerve exhaustion which has been the most important factor in preventing the Northern races settling and procreating their line with the full share of the nerve vigour which their parental stock possessed.

⁶ See Roberts : *French Colonial Policy*, p. 417.

The prevalence of psychoses or psycho-neuroses among the Westerners, whether in East Africa or India, the Dutch East Indies or Indo-China amply testifies to this.

The Criteria of Successful Colonisation: Optimum Implies High Expectation of Life.

The problem of colonisation and settlement must be solved in the future without any racial bias or colour prejudice. The problems of a scientific civilisation must be solved by the methods of Science.

Mendel's laws which govern plant and animal breeding thus apply, though in a modified form, to the question of acclimatisation and settlement of human groups. In the first place, settlement is most successful where there is much similarity of climatic and ecologic conditions. Thus the normal migration of peoples is from countries close at hand or from similar climatic areas. Along with crops and animals, adapted to particular purposes and climates, adaptive social institutions and customs may also be imported by the human groups, thus utilising to the full extent the social-ecologic forces. Secondly, the human group can be considered in stable equilibrium not merely with reference to climate and regional complex but also to their indirect effects, when it shows the highest expectation of life. Birth and death rates are matters of ecologic adjustment. A high average expectation of life is the criterion of successful colonisation as a low expectation is the surest index of over-population. Such an idea of the optimum population cannot, however, be realised unless there is some sort of international control of the movements of the world's surplus populations, the absence of which results in perpetuating a dual living and economic standard.

Also Increase of Numbers (Prof. Gini's New Cycle of Growth).

According to Gini, there is a cyclical rise and fall of population which may be compared with the life cycle of the individual:

In India and China, we have entered upon a period of slower growth and mature achievement. Such a slackening of the rate of natural increase in these old countries is in striking contrast with the high rates of natural increase of the new and inadequately used lands and especially with the sudden increase of energy and proliferation of Indians and Chinese Colonists abroad. It would thus appear that through finding ampler spaces and newer opportunities senescence is checkmated and both numbers and quality of the civilisation improve.

Political Interference with Economic Evolution.

Economic competition and the battle of the standards of living ought to be left to work out their own results without the superimposition of political authority in the directions of spatial or occupational segregation and immigration restriction. Thus the region will be free to evolve its appropriate plane of consumption which bears a close relation to the resources of the region. Nothing is more certain to disturb regional balance than the bolstering up of an artificial standard of living which takes from the region more than it gives, reducing the opportunities of future generations. Besides the Northern races in exercising their political supremacy have encroached on the monsoon region which was already densely peopled, and where the superimposition of commercial agriculture on the economy of the masses has disturbed the normal relation between population and food-supply. The world's population will have a double standard of living and comfort so long as the present maladjustment in the distribution of races and resources continues.

Population Movements.

We give below a detailed statement of the movement of population among the countries which check Asian emigration and the countries which are under the ban. (The number of people is expressed in 000's.)

1. *United States*

	1930	1920	1910	1900	1890	1880	1870	1860
Percentage of increase in population.	16.3	14.9	21.0	20.7	25.5	30.1	22.6	35.6
Birth rate	18.9							
Death rate	11.3							
Rate of natural increase . . .	7.6	9	13.3	16.8	18.5	24.2	16.7	
Immigrants	24	430	8,795	3,688	5,247	2,872	2315	2,598
Emigrants . . . . .	...	77	2,932	1,229	1,749	562	461	519
Population (thousands) . . .	137,008	105,720	91,972	75,995	62,948	36,558	50,156	31,443

2. *Australia*

Percentage of increase in population.	19.6	22	18.07	18.5	41.2			
Birth rate	19.8	30	27	27	35	36	38	
Death rate	8.5	12	11	12	15	15	13	
Rate of natural increase . . .	11.3	18	16	15	20	21	25	
Immigrants	63	109	561					
Emigrants	76	91	515					
Net immigration	13	18	46					
Population (thousands) . . .	6,500	5,435	4,455	3,773	3,133	2,253		

3. *Canada*

	1930	1920	1910	1900	1890	1880	1870
Percentage of increase in population.	18	17	33.1	11.0	16.1	23.2	
Birth rate	24.5	24.8					
Death rate	11.0	11.4					
Immigrants	88	148	1,764				
Population	10,374	8,788	7,447	5,592	5,035	4,336	3,518

4. *New Zealand*

Population	1,443	2,118	1,008	773	627	490	
Percentage increase	18.5	20	30.4	23.2	27.9		
Birth rate	18.8	25	26	26	29	38	40
Death rate	8.6	10	9	10	10	11	10
Immigrants	33	20	344				
Emigrants	28	44	260				
Net immigration	5	...	84				

5. Japan

	1930	1920	1910	1900	1890	1880	1870
Percentage increase	15.2	15	13.5	10.0	11.5	10.2	
Birth rate	32.47	33	33.7	31.9	28.8		
Death rate	18.17	27	21.3	20.6	20.4		
Immigrants	39						
Emigrants	519						
Population	65,367	60,000	50,896	44,816	40,719	36,500	33,111

6. India

Population	352,987	318,156	315,086	294,316	287,271	253,896	20,162
Percentage increase	10.6	1.2	7.1	2.5	13.2	23.2	
Birth rate	35.47	33.0	38	36.58			
Death rate	25.95	30.8	32	38.91			
Immigrants . . . . .	..	603	650	627	525		
Emigrants (1930)	83	1,050	1,023	Figures not available.			

Both India and Japan show however higher birth rates. In Japan the birth rate is higher than that in any other great nation. The following table shows the rates of natural increase of some of the countries we are considering :—

		Birth rate		Death rate		Rate of Natural Increase	
		1930	1920	1930	1920	1930	1920
India (1929) ..	...	35.47	33.65	25.45	24.72	9.5	8.93
Japan ..	..	32.35	34.9	18.17	20.3	14.18	14.6
Canada ..	...	24.5	22.6	11.0	9.7	13.5	12.9
Australia ...	..	19.8	22.9	8.5	9.47	11.3	13.43
South Africa (white)	..	.	26.6	...	9.5	..	17.1
U. S. of America	...	18.9	21.2	11.3	11.7	7.6	9.5
Great Britain	...	15.8	18.30	12.3	12.16	3.5	6.14

It is clear that the rates of increase of population in India and Japan are less than the rates in the United States, Canada and Australia.

Increase per 1,000 population.				
		1900--10	1910--20	1920--30
India	...	5.5	1.2	10.7
Japan	...	12.4	15	15.2
United States		21.0	14.9	16.1
Canada	...	33.1	17	10.3
Australia	...	18.07	22	6.4

The annual increase of Japan's population was 14.78 per 1,000 for 1909—13, 12.06 for 1914—18; 13.14 for 1920—25 and 15.30 for 1925—30; a rate greater than most countries in Europe with the exception of Germany and Rumania in the pre-war years, but smaller than in most countries of the new world. The area

under cultivation, even in the densely populated parts, is comparatively smaller than in any other country. In a statement issued in 1921, the Department of Agriculture reckoned the population at 145 per square kilometre and stated that the density of the rural population was 44 per square kilometre or 9.42 per hectare of arable land; in other words, that "the density is higher than that of France, Belgium, Switzerland and some other countries where the agriculture is marked by fairly intensive methods."⁷

The elemental facts of the Japanese situation are (1) that with a birth rate of 34.7 per 1,000 in 1926 the population increased by over 20 per 1,000 in the year, a phenomenon which is unique in the world, (2) between 1910—1920 the inhabitants of Japan proper (excluding Korea and Formosa) have increased from 50 to 57 millions, which gives an average of 380 to the square mile, (3) that during this period the area of land under cultivation has been increased by 5 per cent, and the rice production by 4 per cent, as against an increase of 12 per cent in the number of mouths to be fed, (4) since 1910, with the exception of two years 1918 and 1919 the rate of increase had been from 12 to 15 per 1,000 per year and the population increased every year by approximately a million, (5) the severity of the pressure of population is indicated by a death-rate which averaged 23.2 per 1,000 between 1919—1923, and by the fact that approximately 25 per cent of the deaths are those of children under 12 months old. In 1924 approximately 40 per cent of the deaths occurred in children under four years. So long as the present birth-rate is maintained, the nation must therefore depend more and more upon imported supplies or upon emigration.⁸ In 1930 the population increased to 64 millions, the rate of increase being 13.14 in the period 1920—25, and 15.30 in the period

⁷ Quoted in Scott, *Foundations of Japan*, p. 392.

⁸ J. O. P. Bland in the *London Times*, May 28, 1920; also Ayusawa in *International Labour Review*, October 1927, and Orchard in the *Geographical Review*, July, 1928.

1925—30. Birth-rate is still very high, 32·35 in 1929, though the death-rate has been somewhat reduced (18·17).

The following table shows the recent figures of birth and death rates and natural increase of countries in the Pacific Region:

Country.	Year.	Birth-rate.	Death-rate.	Rate of natural increase.
India ...	1929	35·47	25·95	9·5
Japan ...	1930	32·35	18·17	14·18
Australia ...	1930	19·8	8·5	11·3
New Zealand ..	1930	18·8	8·6	10·2
Canada ...	1931	24·5	11·0	13·5
United States	1930	18·9	11·3	7·6

The table below would help us to obtain pictures of the economic physiognomy of India, China and Japan on the one hand and of the new countries which are shutting out Oriental emigration on the other⁹:

Percentage in relation to the total area

	Arable land.	Permanent grass and pastures	Wood and forest	Other land
India ...	56·0	24	13	7·0
Japan ...	45·8		13	46·0
China ...	14·1		85·9	
Australia ...	1·3			
New Zealand	2·9	24·5	71·6	
Canada ...	2·5			
U. States ...	18·4			
Union of South Africa	3·1			

⁹ *International Year Book of Agriculture.*

II

		Reserves in tons <i>per capita</i> .	
		Coal.	Iron ore (visible).
India	...	235	10
Japan	...	126	1.4
China	...	1,000	2.6
Australia	...	28,000	164
New Zealand	...	2,511	52
Canada	...	71,050	458
United States	...	22,796	87
Union of South Africa	...	7,464	405

(Figures given in Thompson: *Danger Spots in World Population*, p. 11.)

Population Pressure, an Irresistible Force.

It is obvious that the difference of pressure of population as between India, China and Japan on the one hand and the sparsely populated and inadequately used Pacific areas on the other accounts for economic and political difficulties which are both serious and urgent. The population and food problems of the Orientals cannot be solved without the fair sense and enlightened co-operation of all the nations bordering the Pacific, which is more an Asiatic than an American ocean. Even Australia, New Zealand and New Guinea, which have set a ban on Asiatic immigration, are, geographically speaking, appendages of South-East Asia. The recent decrease of native races in Polynesia, Melanesia and Micronesia has been accompanied by the increase of the Asiatics who are fast filling their places. Such race expansion is the outcome of an inevitable economic tendency whose sweep and strength no nation states will be able to resist in the long run by their fiat and decrees. It has been estimated that, on the present level of technique, Australia could support a population of 450 millions, which is about the same as the population of China, and 33 millions more

than the joint populations of India and Japan today. On the same basis, South America could support 2,400 millions, which is forty times her present numbers, and about two-half times more than the total population of Asia. The struggles of the future will be over inequalities of distribution and land over the earth's surface, and the more sparsely inhabited but potentially productive parts of the earth cannot long exclude the less fortunate peoples.

A STABLE STANDARD OF VALUE

BY

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The rapid fall of prices since the autumn of 1929 has led to the abandonment of the gold standard by the majority of countries. Very few countries now remain on an unrestricted gold standard. The functioning of that standard as an international monetary mechanism has completely broken down. The countries which have left the gold standard either maintain an inconvertible paper currency or a nominal gold parity by controlling foreign payments and foreign trade. A group achieve some stability of exchange-rates among themselves by maintaining a fixed ratio with sterling. Under these circumstances, when neither prices nor exchange-rates are stable, economic recovery is impossible. The introduction of a stable international standard is, therefore, the first step towards economic reconstruction.

Realising the importance of this essential preliminary step, considerable attention has been given to this question in recent discussions. Invariably it has been suggested that the gold standard should be restored as soon as possible. The Final Report of the Gold Delegation of the Financial Committee of the League of Nations states that "the Delegation, however, records its belief that, at the present stage of world economic development, the gold standard remains the best available monetary mechanism."¹ The Draft Annotated Agenda prepared for the World Economic and

¹ P. 28.

Monetary Conference by its Preparatory Commission of Experts starts from the assumption that the restoration of international gold standard is the aim to be kept in view.² And the World Economic Conference itself adopted a resolution stating that gold should be re-established as the international measure of exchange values.³ In view of such strong opinion in favour of the re-establishment of the gold standard, there appears to be every likelihood of its being ultimately restored, but it is open to question whether stability of the value of money in terms of commodities can be attained through this means.

1. The Supply of Gold.

Changes in the value of gold can arise either on account of maldistribution or on account of a fundamental change in the supply of gold with reference to the demand, which cannot be corrected even with the best possible distribution. It is the latter aspect of the problem which makes it doubtful whether stability can be attained by going back to the gold standard, for it is to be presumed that nations would be prepared to correct defects of distribution by international agreements if they decided to revert to the gold standard.

Secular changes in the supply of gold are, therefore, of fundamental importance. To estimate future world output of gold it is necessary to consider what are the possibilities of discovery of new gold fields and of increasing the yield of gold from ores mined. The search for gold has grown in intensity since the middle of the nineteenth century and the world has now been fairly well prospected. Gold occurs in many parts but is not concentrated enough for extraction on a commercial basis. All the gold fields which

² P. 12 and recommendations on pages 13—17.

³ Reports approved by the Conference. League of Nations Series II, Economic and Financial, 1933, II. Spec., 4., p. 12.

are commercially paying are being worked at present. Gold from the Rand, which now amounts to more than 50 per cent of the total output, occurs in a unique formation. It is not known to occur anywhere else in the same way.⁴ The possibility, therefore, of discovery of new gold fields seems to be remote, so far as can be foreseen.

As regards increase in the yield from ores, the cyanide process seems to have exhausted all possibility of improvement. Before the use of this process mechanical methods were used yielding 50 to 60 per cent of the gold content of the ore. Cyanide process has now increased the yield to 97 per cent of the gold content of the ore on the Rand and to more than 90 per cent for the world as a whole. There appears to be very little possibility of increase in the supply of gold from improvements in methods of extraction.

We have, therefore, to fall back for our estimate of future production of gold on the production of existing gold fields yielding about the existing percentage of the gold contents of the ores. Gold mining property is a rapidly wasting asset. To get the maximum profit it is necessary that a mine should be worked out in a comparatively short time. On the Rand, they aim at a period of twenty years. Transvaal mines are the only mines which do not yet show a falling off of production, but it is expected that from about 1933 their production also will decline. On the basis of these general considerations and intimate knowledge of gold production, Mr. J. Kitchen in 1930 made an estimate of the production of gold for a period of 50 years, from 1900 to 1949.⁵ His figures are given in the following table.

⁴ Except in West Africa, where the production never reached a large figure and is now rapidly falling.

⁵ Kitchen, *Memorandum on Gold Production*, p. 54 in a collection of papers entitled *International Gold Problems* issued by the Institute of International Affairs, London.

TABLE 1

ESTIMATED GOLD PRODUCTION OF THE WORLD, 1900—49

(In millions of gold dollars.)

Years.	Gold Production.
1900—04	1,244
1905—09	2,096
1910—14	2,287
1915—19	2,094
1920—24	1,747
1925—29	2,008
1930—34	2,025
1935—39	1,941
1940—44	1,703
1945—49	1,441

Table 1 shows that gold production reached its maximum during the quinquennium 1910—14. It is expected to reach another comparatively low maximum during 1930—34 and then to decline rapidly to about 70 per cent of that figure in 1945—49. For the period 1930—40, for which an independent estimate was made by the League of Nations authorities, Mr. Kitchin's figures are considerably higher than the League estimates.⁶ The League figures and Mr. Kitchin's annual figures for 1930—40 are given in Appendix 1. In 1940 the figure of gold production estimated by the League of Nations is 314 million gold dollars as compared with

⁶ Loveday, *Gold : Supply and Demand*, in the First Interim Report of the Gold Delegation, Annex XIII, pp. 88—90.

370 million gold dollars arrived at by Mr. Kitchin. It cannot, therefore, be said that Mr. Kitchin errs on the side of under-estimation. It seems very likely that the annual gold production will fall off from about 1933, declining at an increasing rate, which will become quite considerable after 1945.

2. The Demand for Gold.

(a) *Non-Monetary Demand*.—What we are primarily concerned with is, however, the supply of monetary gold and not total gold production. It is necessary, therefore, to form an estimate of non-monetary demand for gold in order to arrive at the amount available for monetary purposes. As the gold which goes into India and China becomes largely useless for monetary purposes and as, in any case, information is not available as to how it is distributed between monetary and industrial uses, it seems best to deduct this amount as well from total production in order to arrive at the figure available for monetary purposes. The demand for use in industries has been estimated at about \$100 million in 1930. From 1926 to 1929, \$1617 million worth of gold was produced; out of this \$307 million was absorbed by India and \$927 million was added to the world's monetary stock. So that \$383 million or about \$95 million per annum was absorbed by the industries.

The rate of absorption in India is very variable depending on different factors. It was about 80 million gold dollars per annum during the quinquennium ending 1930. This figure is not at all too large for Indian absorption. In 1930, therefore, the total non-monetary demand for gold was \$180 million. In order to estimate the non-monetary demand in the future we have to make some assumption as to the rate of growth. It appears reasonable to assume that it grows at the rate of 1 per cent per annum, that is, in proportion to the growth of population. This is a very conservative assumption as it is known that wealth has been increasing much faster than population, probably three times as fast. On

this assumption an estimate of the amount of gold available for monetary purposes has been made and is given in the following table :

TABLE 2

ESTIMATED NON-MONETARY DEMAND FOR GOLD AND THE AMOUNT
AVAILABLE FOR MONETARY PURPOSES, 1930—49.

(In millions of gold dollars.)

Years.	Total Gold Production.	Non-Monetary Demand.	Amount Available for Monetary Purposes.
1930—34	2,025	920	1,105
1935—39	1,941	970	971
1940—44	1,703	1,020	683
1945—49	1,441	1,060	381

It is obvious that the amount available for monetary purposes will rapidly decline until, during the quinquennium 1945—49, it is likely to be about 25 per cent of the amount available in 1930—34. Annual figures for 1930—40, corresponding to the 5-yearly totals given in Table 2, are given in Appendix 2.

(b) *Monetary Demand*.—The demand for currency is dependent upon the volume of production and trade and on the monetary transactions to which such trade gives rise. The demand for gold, which forms the basis of currency under the gold standard system, is determined by the same factors in the absence of any important changes in the currency system. Therefore, the stock of monetary gold should increase in the same proportion as increase in production and trade if stability of prices is to be maintained. No direct measurement of either the present or the past rate of economic progress, can be made. But certain estimates have been made which suggest that during 1850—1910 the rate of development was about 3 per cent per annum. Professor G. Cassel finds that the

general price-level in 1910 was about the same as in 1850, so that an increase in the total stock of gold during this period gives an indication of the increase in production and trade. He finds that the average increase of gold stock during this period was about 3 per cent per annum and says that "we stand on fairly solid ground if we reckon with a figure of about 3 per cent as the characteristic of economic development during the period 1850—1910."⁷ Mr. J. Kitchin working on the same principle but basing his argument on the increase in the monetary stock of gold and not on the total stock finds that the average rate of economic progress was about 3.1 per cent per annum during the same period.⁸ Mr. Carl Snyder and other authorities in the United States of America find that in that country the rate of economic development was 3.5 per cent per annum since 1870.⁹ We are, therefore, justified in believing that the demand for monetary gold, in the absence of radical changes in the monetary system, should increase by 3 per cent per annum in order that additional currency necessary for meeting the requirements of increasing production and trade should be forthcoming, without causing a fall in the price-level.

In order to arrive at the estimated figures of demand for monetary gold, rate of growth is not sufficient. We have to take into consideration, in addition, the legal minimum reserve requirements and to find out the total credit currency in existence in the year beyond which we wish to estimate. In 1928, the last normal year, the total note and sight liabilities of the central banks of the world amounted to \$ 24,571 million. The legal minimum requirements for gold reserve varied between 29 and 34 per cent. As it is customary to carry a certain amount over and above the

⁷ Cassel, G.: *Memorandum on the Supply of Gold*, Annex X to First Interim Report of the Gold Delegation.

⁸ Kitchin, J.: *Memorandum on the Supply of Gold Compared with the Prices of Commodities*, Annex XI to the First Interim Report of the Gold Delegation.

⁹ Snyder, Carl.: *Business Cycles and Business Measurement*.

legal minimum, usually about 7 per cent, we would be justified in concluding that the actual gold reserve necessary would be between 33 and 40 per cent. Working on the note and sight liability of \$24,571 million in 1928 and an annual increase of 3 per cent in total currency, the amount of monetary gold required each year in order to supply the necessary additional currency is given in the following table on the basis of 33 per cent and 40 per cent cover.

TABLE 3

ANNUAL INCREMENT IN GOLD RESERVE REQUIRED
TO PROVIDE 33 PER CENT AND 40 PER CENT
COVER, ASSUMING A 3 PER CENT ANNUAL
INCREASE IN CURRENCY.

(In millions of gold dollars.)

Years.	Increment in Gold Reserve Required to Provide		Excess or Deficit of the Amount of New Gold Available Compared with Increment Required to Provide	
	33 per cent Cover.	40 per cent Cover.	33 per cent Cover.	40 per cent Cover.
1930	253	303	- 29	- 79
1931	260	313	- 40	- 93
1932	269	323	- 43	- 97
1933	276	332	- 55	- 111
1934	285	341	- 70	- 123
1935	294	352	- 86	- 144
1936	302	363	- 97	- 158
1937	311	373	- 113	- 175
1938	321	385	- 133	- 197
1939	330	396	- 153	- 224
1940	340	408	- 170	- 238

It is not necessary to carry this table beyond 1940. It is evident that on the basis of both 33 and 40 per cent cover, the amount of monetary gold available each year is insufficient to meet the demand and the deficiency increases rapidly. Therefore, the only possibility of maintaining the price-level at the 1928 level, assuming a rate of growth of 3 per cent in economic activities, seems to be to fall back on any excessive reserves of monetary gold for making up the deficiency in the annual supply. On the basis of existing laws regarding cover and the existing practice of carrying 7 per cent 'cushion,' no redundant stock of monetary gold was available in 1928. The average legal requirement for cover is about 33 per cent and the customary 7 per cent 'cushion' raises it to 40 per cent.¹⁰ The actual monetary reserve, in 1928, was 40·7 per cent, so that the surplus margin was negligible. Under existing laws regarding reserve ratio, it appears, therefore impossible that any help could be received from redundant stock of monetary gold, and Table 3 shows that the amount of new gold likely to become available could not by itself prove adequate to maintain prices.

3. Methods of Economising Gold.

Realising this difficulty a number of suggestions have been made for economising the use of monetary gold, so that a larger structure of credit could be built on any given amount. These suggestions fall into six classes,—(1) Discontinuance of the use of gold for internal payments, (2) Replacement of notes of small denomination by coins of metals other than gold, (3) Extension of the use of cheques and other credit instruments of that nature, (4) Reduction in the legal minimum reserve requirements and also in the customary 'cushion' carried over and above that amount, (5) Extensive use of the gold-exchange standard system, (6) Permission to carry the legal reserve partly in gold and partly

¹⁰ First Interim Report of the Gold Delegation, p. 100.

in silver.¹¹ There is not any possibility of a large saving in the use of gold from the first three of these suggestions. Already 94 per cent of monetary stock of gold is in the central banks, so that the use of gold coins for internal payments has largely ceased. Notes of small denomination are not now used over the greater part of the world and the use of cheques is well developed in Western countries. In countries where cheques are not commonly used, their use cannot be increased very much by any banking or currency arrangements. Substantial economy in use of monetary gold can, therefore, be effected only by the extensive use of the gold-exchange standard and by reduction of the minimum cover requirements.

The gold-exchange standard has, however, fallen in popularity lately. After the War, it was considered the best remedy for the currency difficulties of that period. But since then the attitude of many European countries has changed, so much so that "it has come for good or evil to be regarded increasingly as a British fad, and in some quarters on the Continent even as a nefarious plant to put Europe under the financial heel of London."¹² Under these conditions the possibility of a large extension in the permanent use of the gold-exchange standard seems to be remote. The use of the ideal form of the gold-exchange standard system, under which the total monetary gold stock of the world is held under the control of an international organisation, is, of course, quite impossible. Introduction of this system in a few subject countries or in countries which are economically backward will not lead to large economy and will be resented as a badge of inferiority.

¹¹ For suggested methods of economising the use of monetary gold see :— (1) First Interim Report of the Gold Delegation, pp. 18—20, and other documents of the Gold Delegation; (2) Sir Otto Niemeyer's paper *How to Economise Gold in the International Gold Problems*; (3) The Draft Annotated Agenda of the World Economic Conference, pp. 15—18; and (4) Keynes, J. M., *A Treatise on Money*, Vol. II, pp. 395—98.

¹² Sir Otto Niemeyer, *How to Economise Gold, International Gold Problems*, p. 91.

Therefore, the chief practical method of effecting economy in the use of gold seems to be the reduction of the minimum cover requirements. The last suggestion, that is the permission to carry part of the reserve in silver, from the present point of view amounts to a reduction in the minimum gold cover, and therefore need not be considered separately. It has been proposed that the minimum gold cover requirements should be reduced to 25 per cent, and the World Economic Conference adopted a resolution endorsing this suggestion.¹³ If this recommendation is adopted by the governments of different countries and if central banks cooperated among themselves to give effect to this proposal, they would have to carry a reserve of 32 per cent, adding 7 per cent customary 'cushion' to 25 per cent proposed minimum legal reserve. So that the situation regarding annual supply and demand of gold would be more or less as indicated in Table 3 on the basis of 33 per cent reserve. If central banks also agreed to reduce the customary 'cushion' the position would be slightly better. But the deficit in the annual supply would still continue. However, a fairly large part of the existing gold reserve of central banks, which is not redundant under the present laws, would become so and could be used for making up the deficit in the annual supply. Under the present laws the average reserve carried is about 40 per cent—33 per cent average minimum legal requirement and 7 per cent 'cushion.' Under the proposed arrangement this would be reduced to 32 per cent or slightly lower figure. The difference would be available for being used as the basis of credit in the future. In 1928, although no margin was available on the basis of 40 per cent reserve, on the basis of 33 per cent reserve 1,800 million was available for being used for making up deficiency in the future supply of gold. On the basis of 33 per cent cover we find from Table 3 that the total deficit in 1940 will amount to about \$ 1,000 million. This surplus stock of monetary gold would,

¹³ Reports Approved by the Conference, p. 12. League of Nations Series II.

therefore, suffice to provide the basis for additional currency till about 1945.

Even with the best possible use of gold, therefore, it does not appear likely that a supply of gold sufficient for providing the necessary increase in currency would be forthcoming after about 1950. It is true that most of the assumptions on which this conclusion is based have been for the time being upset by the present fall of prices or rise in the commodity value of gold. The gold actually mined in 1931 was \$459 million¹⁴ as compared with the estimate of \$402 million given here. India instead of absorbing gold has been exporting large quantities, consumption in industries has declined and the gold reserve of central banks has been fed from these sources as well as from hoards of unrecorded coin. These tendencies are bound to operate with every sudden rise in the value of gold. The study of the supply and the demand of gold is really much more complicated than the treatment presented here. It is a problem in composite demand and composite supply of a peculiar kind, as the supply for any particular purpose is made up of new mined gold as well as the total stock of gold employed in other uses. Treatment of the problem on these lines is, however, impossible with the present available information. The comparatively simpler presentation given here, though not a complete solution of the problem, still indicates general long period tendencies. With a large sudden rise in the value of gold a temporary new adjustment of the forces of supply and demand and a flow of gold into the monetary use is to be expected. But this does not invalidate our conclusions regarding the fundamental secular changes. In the long period sudden disturbances in the value of gold on account of its misuse or maldistribution, can have comparatively small effect.

Moreover, so far the possibility of India and China adopting the gold standard has not been taken into account. In India there

¹⁴ Annual Report of the U.S.A. Director of Mint, 1932, p. 151.

is already considerable public opinion in favour of adopting the gold standard as distinguished from the gold-exchange standard. With the restoration of the gold standard in the more important nations of the world, this desire is bound to grow both in India and China. If India and China adopt the gold standard, any permanent increase in the world stock of monetary gold, on account of the events of the last few years, will be more than offset by the new demand. In any case, therefore, the possibility of keeping the secular price-level stable on a gold basis seems to be very remote.

4. Other Standards of Value.

To reconstruct on the basis of the gold standard is, therefore, to build on insecure foundation. The only other standards that have been proposed are either variants of the tabular standard or bimetallism. These variations of the tabular standard are based on the idea of regulating the standard of value on the basis of some index-number of prices. The difficulty arises in choosing an index-number which will indicate changes in the value of money. Even within a country it is extremely difficult to form an index-number which will reflect changes in the general value of money, but when the idea is applied to the regulation of an international standard of value it completely breaks down. For international regulation, the best that can be done is to be guided by index-numbers of prices of commodities which largely enter into world foreign trade, as, for instance, the 62 commodities taken into consideration in the League of Nations' Memorandum on Production and Trade.¹⁵ But if the value of money is regulated with reference to an international index of this kind, the internal price-level in any country may not be stable at all because the internal value of the standard will depend on a number of other articles. And if

¹⁵ Keynes, J. M.: *A Treatise on Money*, Vol. II, pp. 389—94.

the value is stabilised on the basis of an internal index-number, the external value of the standard will fluctuate or the exchange rates will vary. This seems to be a fundamental objection to all the proposed variants of the tabular standard. It is impossible under this system to attain international stability side by side with stability within the country. The other objection to these standards arises out of the fact that, however we may disapprove it, confidence in a currency system in the majority of people is linked with the standard being representative of a fixed amount of a precious metal. This condition is not fulfilled by all the proposed systems. Take, for instance, Professor Irving Fisher's plan of a compensated dollar. He would change the amount of gold represented by a dollar according to changes in the price-level. The majority of the people, have a deep-rooted belief that equal quantities of metals, in particular gold, have equal values, and therefore cannot look at proposals of this nature with favour.

As regards bimetallism, its chief defect is that in practice it amounts to alternating monometallism. Even if there is a world-wide agreement for adopting bimetallism, the fundamental danger of its being in turns either gold or silver standard does not disappear. It is impossible to control the ratio at which two articles should exchange unless all the sources of supply and demand are controlled by the same authority and unless competitive regulation depending on cost of production is suspended. In practice, if there is an international agreement as to the ratio at which gold and silver should circulate, that agreement in itself will help to maintain that ratio unless some radical change in the conditions of supply or in demand for non-monetary purposes takes place. During the 70 years from 1803 to 1873, when the legal ratio in the bimetallic countries was 1 to 15.5, the actual commercial ratio never exceeded 1 to 16 or fell below 1 to 15.¹⁶ So that even when the whole world was not on the bimetallic basis, the legal ratio

¹⁶ Nogaro, *Modern Currency System*, pp. 16-17.

helped to stabilise the commercial ratio. But this stabilising influence can be exercised only within limits. Even if the whole world agrees to work the bimetallic system at a fixed ratio, it is possible that this ratio may not be maintained if there is a fundamental change in conditions of supply, for instance, if mines of one metal get exhausted at a quicker rate than those of the other so that new production of the metals declines at different rates.

5. Symmetallism.

A way out of these difficulties can be found in a proposal made by Marshall as early as 1888 but forgotten in recent currency discussions. In his evidence before the Royal Commission on the Values of Gold and Silver, he suggested that a mixture of gold and silver was the best basis for an international standard of value.¹⁷ This system was later called symmetallism. A symmetrical system even today seems to be the best possible currency system. It is free from most of the defects we have seen in the other proposed systems and it has some advantages of its own. Under this system the gradual fall in prices, which we saw was likely to take place under the gold standard system on account of a decline in the supply of monetary gold with reference to demand, need not occur. The supply of money metal will be increased by additions of silver and will be sufficient for supporting the credit structure for as long as can be foreseen. The divergence between the internal and the external value of the standard, which we saw was one of the chief defects of the systems based on the regulation of the value of money on some kind of index-numbers, will not arise. If the credit structure is regulated in such a way as to maintain a stable internal price-level, all that is required will be achieved. On the basis of a fixed ratio of gold and silver in the mixture, the exchange-rate will be fixed in the same way as between two gold standard countries.

¹⁷ Marshall, *Official Papers*, pp. 27—31 and 101-02.

On the other hand this system will have some advantages of its own. Apart from the difficulty of maintaining a fixed ratio, bimetallism has many advantages to recommend itself. In the case of symmetallism all those advantages can be enjoyed without this difficulty. In addition, the symmetrical standard will be much more stable than ordinary bimetallic standard.¹⁸ As the value of the standard will be based on the average of the two metals, when the two happen to be changing in opposite directions the value of the standard will be more stable than with the gold standard. The danger of the collapse of the price-level if India and China adopted the gold standard would cease to exist. And the immediate inflation necessary for restoring the normal price-level, to which everybody seems to be committed, would be brought about without the currency losing contact with the precious metals. Partial monetization of silver in this manner, would help to restore the normal value of silver and what is known as the silver problem would be largely solved. The increase in the value of silver would increase the purchasing power of the whole of the East, and so indirectly create a demand for goods which cannot be sold at present.

As regards the question of the ratio in which gold and silver should be mixed in order to form the basis of currency, the best proportion would be to mix together physical quantities of the two metals exactly equal in value. In this mixture any change in the value of silver with reference to gold will be entirely compensated, and the price of both gold and silver in the new currency will be permanently fixed. It is difficult to suggest the actual figure, but some light on this question may be thrown by the following table.

¹⁸ Edgeworth, F. Y.: *Questions Connected with Bimetallism*, Papers Relating to Political Economy, Vol. 1, pp. 481—42.

TABLE 4

AVERAGE COMMERCIAL RATIO OF SILVER TO GOLD FROM 1900.

Year.	Ratio.	Year.	Ratio.
1900	33.3	1916	30.8
1901	34.7	1917	24.6
1902	39.2	1918	21.0
1903	38.1	1919	18.4
1904	35.7		
1905	33.9	1920	20.3
1906	30.5	1921	32.8
1907	31.2	1922	30.4
1908	38.2	1923	31.7
1909	39.7	1924	30.8
		1925	29.8
1910	38.2	1926	33.1
1911	38.3	1927	36.5
1912	33.6	1928	35.3
1913	34.2	1929	38.8
1914	37.4		
1915	40.5	1930	53.7
		1931	71.3

The ratio fluctuated between 30 and 40, except from 1915 to 1920 and during the last two years of the table. These periods can be ignored as being abnormal. It appears that the normal rate in modern times is in the neighbourhood of 35. If once the price of silver recovers from the present depression the ratio should be about 1 to 35, and the two metals should be combined in this ratio. Slight variation from this figure will not matter, for whatever be the commercial ratio if at that ratio quantities of the two metals equal in value are combined together, the price of both gold and silver will become fixed.

Efforts for an international agreement for the restoration of a stable international standard of value should be directed towards this end and not towards the restoration of the gold standard. All that is required is to agree to a fixed ratio in which to mix gold and silver. The system, otherwise, will work as automatically as the gold standard. Even if the whole of the world does not agree to it, a group of nations will find it an advantageous method of depreciating currency and raising prices, and when conditions stabilize will find themselves on a more stable and workable standard than those which choose to revert to the gold standard, though under these conditions stability of exchange-rates with the gold standard countries will not be attained.

APPENDIX 1

COMPARISON OF THE LEAGUE OF NATIONS' ESTIMATE AND
MR. KITCHIN'S ESTIMATE OF GOLD PRODUCTION, 1930—40

In the following table are given the annual estimates of the total gold production of the world prepared by the League of Nations and by Mr. J. Kitchin. The League figures are based on information obtained officially from the more important gold producing countries. The Gold Delegation for which both these estimates were made adopted Mr. Kitchin's figures. An account of these estimates can be seen in Annexes VII and XIII of the First Interim Report of the Gold Delegation.

ESTIMATES OF WORLD GOLD PRODUCTION, 1930—40

(In millions of gold dollars.)

Years.	League of Nations' Estimate.	Mr. Kitchin's Estimate.
1930	405	404
1931	401	402
1932	407	410
1933	399	407
1934	390	403
1935	381	398
1936	356	397
1937	357	392
1938	357	384
1939	323	370
1940	314	370

APPENDIX 2

ESTIMATED WORLD GOLD PRODUCTION, NON-MONETARY DEMAND AND
THE AMOUNT AVAILABLE FOR MONETARY PURPOSES, 1930—40

(In millions of gold dollars.)

Years.	Gold Production.	Non-monetary Demand.	Amount Available for Monetary purposes.
1930	404	180	224
1931	402	182	220
1932	410	184	226
1933	407	186	221
1934	403	188	215
1935	398	190	208
1936	397	192	205
1937	392	194	198
1938	384	196	188
1939	370	198	172
1940	370	200	170

THE INDIAN CURRENCY STANDARD

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In the following we shall attempt to examine two currency standards: (1) the standard recommended by the Royal Commission on Indian Currency, 1926 and (2) the standard adopted by the Indian Currency Act 1927. We exclude from consideration, therefore, the situation created by the suspension of the gold standard in September, 1931. And, although we shall make reference to it for purposes of comparison, we shall not give primary consideration to the currency system as it operated before the War.

The excuse for this analysis is the widely prevalent conception that the standard of the Commission was similar to that adopted in Great Britain in 1925 and in France in 1928, and which is generally called, Gold Bullion Standard;¹ and that, till September, 1931, India was on such a standard.² A proper appraisalment of the two standards, however, would show that it is incorrect to class them under the Gold Bullion Standard.

¹ No book on the subject I have so far consulted has called the Commission's standard by any other name than Gold Bullion Standard. I may give here reference only to one widely read author in India. H. L. Chablani: *Studies in Indian Currency and Exchange* (1931), see chapter on Gold Bullion Standard particularly, pp. 171 et. seq.

² This last notion in particular is apparently prevalent among economists of more than one country who have made reference or paid attention to the subject. e.g., see (a) T. E. Gregory: *The Silver Situation: Problems and Possibilities*, p. 21; (b) S. E. Harris: *Monetary Problems of the British Empire*, p. 453; (c) A. J. Saunders: *The Indian Reserve Bank and Sir Basil Blackett's Work in India*. *Economic Journal*, September, 1928, p. 406.

I

The main features of the Commission's standard may be summarised as follows:

(1) Paper expressed in rupees and issued by a Reserve Bank (the establishment of which the Commission recommended) shall be unlimited legal tender which quality shall be withdrawn from the sovereign and the half-sovereign. Paper shall not be *legally* convertible into rupee coins (silver tokens).³

(2) The Reserve Bank shall sell gold for rupees at its Bombay Office in bars of approximately 400 ounces (1,065 tolas) at the price of Rs. 21-3-10 per tola (180 grains) of fine gold, but subject to the reservation under (3) below.

(3) When the market rate for telegraphic transfers on London is *less than* the gold import point into India the Bank shall sell gold for delivery in Bombay or in London at the option of the purchaser at certain "notified prices."

(a) The notified price for delivery in London shall be Rs. 21-3-10 per tola of fine gold *plus* an amount corresponding to the expenses of transporting gold bullion from Bombay to the Bank of England, London, including packing, freight, insurance and loss of interest.

(b) The notified price for delivery in Bombay shall be the said price *plus* an amount corresponding to *twice* the said expenses.

³ The coinage of rupees was to be stopped "until the amount of silver rupees in circulation is reduced to the amount required for small change." (Para 59 of the Report.) The rupee coins, therefore, were eventually if not immediately, to play the part of subsidiary coinage and the responsibility for supplying them, in conformity with the usual practice in other countries in this respect was to be that of the Government and not of the Central Bank.

These prices shall be calculated by the Reserve Bank from time to time and after approval by the Government published in the Gazette of India.⁴

(4) The Reserve Bank shall buy gold in Bombay, Calcutta, and Madras for delivery at its Bombay office in exchange for rupees at the rate of Rs. 21-3-10 per tola of fine gold in bars of approximately 400 ounces of fine gold.⁵

The second and the fourth of these provisions, unaccompanied by the third would render the Commission's standard a perfect Gold Bullion Standard. The Reserve Bank's buying and selling price of gold would then be identical and the gold value of the rupee at the place of issue would remain *exactly* 8.47512 grains⁶ of fine gold. But in England and France the gold value of their respective currencies might fluctuate between limits appropriate to the difference between the buying and the selling price of gold of their respective Banks of issue. To this extent the Commission's standard would then have been superior to the British and the French standards.

But, as will be seen below, provision (3) by rendering provision (2) inoperative makes the standard of the Commission different from a Gold Bullion Standard. It limits the Reserve Bank's offer to sell gold in Bombay at Rs. 21-3-10 per tola of fine gold only to occasions when the rupee sterling exchanges are at or above the old import point into India from England.

The price of Rs. 21-3-10 per tola of fine gold represents the Bank of England's selling price of gold expressed in rupees and tolas of fine gold, instead of in sterling and ounces of standard gold,

⁴ Para. 180 of the Report.

⁵ Para 151.

⁶ *Vide* reference 7.

sterling being converted into rupees at 18d. a rupee.⁷ It also equates a rupee to 8.47512 grains of fine gold. Thus if rupee 1 = 18d. sterling, provided sterling is on gold, we mean identically the same thing when we say, that in London,

(a) rupee 1 = 18d. sterling;

(b) rupee 1 = 18d. gold;⁸

(c) rupee 1 = 8.47512 grains of fine gold; and

(d) Rs. 21-3-10 = one tola of fine gold.

Therefore, if for convenience of analysis we represent the expenses of transporting gold bullion from Bombay to London by x d. per 18d. gold, provision (3) limits the Reserve Bank's offer to deliver gold in Bombay at 18d. gold only to occasions when the exchanges are at or above $(18+x)$ d. a rupee.

When exchanges are at or above $(18+x)$ d., gold would be flowing to India from England and would be offered to the Reserve Bank under provision (4) at 18d. gold a rupee. When the exchanges are *above* $(18+x)$ d., the bullion dealer would do this on his own account for the profit the transactions would yield him. He would buy sterling in the market at $(18+x+\alpha)$ d. a rupee, where

⁷ This calculation may be made as follows :—

$$\begin{aligned}
 1 \text{ oz. of standard gold} &= 77s. 10\frac{1}{2}d \\
 \therefore 1 \text{ oz. of fine gold} &= \frac{12}{11} \times 77s. 10\frac{1}{2}d. \\
 &= \frac{1869}{2 \times 11} s. \\
 \text{Now,} \quad 1 \text{ oz.} &= 480 \text{ grains.} \\
 \quad 1 \text{ tola} &= 180 \text{ grains.} \\
 \quad \text{and 1 rupee} &= 1s. 6d. \\
 \therefore 1 \text{ tola of fine gold} &= \frac{180}{480} \times \frac{1869}{2 \times 11} s. \\
 &= Rs. \frac{8}{8} \times \frac{1869}{2 \times 11} \times \frac{2}{8} \\
 &= Rs. 21 - 3 \frac{9}{11} \\
 &= Rs. 21 - 3 - 10 \text{ (approximately)}
 \end{aligned}$$

⁸ By the term 18d. gold we shall mean, standard gold of the value of 18d. sterling at the Bank of England's selling price of gold.

α d stands for the excess of the market rate of exchange over $(18+x)$ d.; with this buy equivalent gold from the Bank of England; pay expenses of transporting it at the rate of x d.; offer this gold to the Reserve Bank at the rate of 18d. gold and thus realize profits at α d a rupee. When the exchanges are just $(18+x)$ d. he would perhaps act on behalf of the business community who (owing to the relative scarcity of import bills which an exchange rate of $(18+x)$ d. implies would find it necessary to import gold to place themselves in funds.

It is inconceivable, therefore, that demand will be made of the Reserve Bank to deliver gold in Bombay at 18d. gold a rupee when exchanges are at or above $(18+x)$ d. Gold would then be offered to the Bank at this rate either because it yields a profit to the bullion dealer or because the business community finds it necessary to do so. Thus provision (2) would remain inoperative. It would play no part whatever in determining the character of the standard.

But this is not true of provision (4). It prevents the rupee from rising above 18d. by more than the cost of remitting gold to Bombay from England, i.e., above $(18+x)$ d.⁹

⁹ In the light of the above analysis of the Commission's Standard the following remarks of Professor Chabliani are of peculiar interest. After quoting Sir Basil Blackett's address to the Delhi University at length, he observes: "These inexact expressions ('these' here referring to expressions like 'the 1s. 6d. rate' or 'a 1s. 6d. rupee') are likely to lead the unwary reader . . . into the error of believing that it was all a question of fixing exchange in terms of *sterling* or the British standard of value. *As a matter of fact, they mean nothing more than that the gold parity of the rupee was being fixed at 8.47512 grains of gold.* Unlike the monetary standard in pre-War days, the new gold bullion standard would not be a *dependent* standard. Under it, rupees and notes would be linked, not to any *foreign currency*, but directly to *gold*. It avoided the mistake committed by the authors of the pre-War currency system of linking the maintenance of the standard of value with the incidental and varying circumstances of exchange and of placing it at the mercy of currency and credit changes in England. The real standard of value in India would be neither the silver rupee nor the *sterling*, but gold and gold alone." *Op. cit.*, pp. 171-72.

We may next examine provision (3). It states that when exchanges are below $(18+x)d.$ the Reserve Bank shall deliver gold, (a) in London at $(18-x)d.$ gold,¹⁰ (b) in Bombay at $(18-2x)d.$ gold¹¹ per rupee.

When exchanges are between $(18+x)d.$ and $(18-x)d.$ remittances abroad would be made through the foreign exchange market and not through the Reserve Bank. For, supposing the market rate of exchange to be $(18-x+\text{ } \text{ } \text{ })d.$ where $\text{ } \text{ } \text{ } d.$ stands for the excess of the market rate over $(18-x)d.$ one would get $\text{ } \text{ } \text{ } d.$ per rupee more in the market than at the Reserve Bank.

But when exchanges are at (or below) $(18-x)d.$ recourse will be had to the Reserve Bank's offer of gold in London, either by the bullion dealers on their own account or on account of the business community to liquidate the adverse balance of payments which this state of the exchanges implies.

But the Bank's offer to deliver gold in Bombay at $(18-2x)d.$ gold a rupee when exchanges are between $(18\pm x)d.$ would not be of service either to the bullion dealer or to the business community. For, one could then place himself in possession of gold in Bombay at $(18-2x+\text{ } \text{ } \text{ })d.$ gold a rupee and therefore realize profits at the rate of $\text{ } \text{ } \text{ } d.$ if the Reserve Bank were to agree to buy gold in Bombay at the rate at which it offers to deliver it!

When exchanges are just $(18-x)d.$ it is probably a matter of indifference to the bullion dealer whether he imports gold himself or buys it from the Bank. But if \bar{x} as calculated by the Reserve Bank should prove to be higher than the corresponding expenses for the bullion dealer even by a trifle, the latter would import gold himself. Further importation on his own account might have some value as an advertisement. Also, since the Bank would

(The italics in the above passage are author's own and comment is unnecessary.)

10 By the term 18d. gold we shall mean, standard gold of the value of 18d. sterling at the Bank of England's selling price of gold.

11 *Ibid.*

supply him bullion only in bars of approximately 400 ounces if his requirements are not of these dimensions he would not ask the Bank for gold.

This offer would not prove of service to the business community so long as gold is available in London at $(18 - x)d.$ For, their debt obligations when the exchanges are at the gold export point would be abroad and not in Bombay.¹²

Thus like provision (2), provision (3)b would also remain in-operative. In no event would it affect the character of the Standard. This is determined exclusively by provisions (4) and (3)a. The one prevents the rupee from appreciating above 18d. by more than the cost of importing gold into Bombay from England and the other prevents it from depreciating below $(18 - x)d.$

II

How does this standard differ from the Sterling Exchange Standard? Under the Sterling Exchange Standard, the exchange value of the rupee would be kept within $(18 \pm x)d.$ by the purchase and sale of sterling by the currency authority at $(18 + x)d.$ and $(18 - x)d.$ a rupee, respectively. And from the above analysis it would seem that under the standard of the Commission these limits would also be $(18 \pm x)d.$ ¹³

But there would be some difference which we have so far ignored. Since the Commission's Reserve Bank would only offer tolas of fine gold at $(18 - x)d.$ gold a rupee and not sterling the rupee might depreciate below $(18 - x)d.$ by the fraction appropriate to the difference between the Bank of England's buying and selling price of gold. It would pay per every ounce of gold $1\frac{1}{2}d.$ less than the value paid to the Reserve Bank in India to obtain the

¹² We need not take into account here the situation when exchanges are below $(18 - x)d.$ For, this is unlikely so long as the offer to deliver gold in London at $(18 - x)d.$ remains in force.

¹³ See Footnote No. 9, p. 191.

gold. That is to say, since payments are made in currency and not in bars of fine gold each weighing approximately 400 ounces per every draft of the value of 400 ounces of gold, businessmen might incur an additional expense of £2-10-0 under the Commission's standard to that under a Sterling Exchange Standard! But if this difference be ignored there is little to distinguish the standard of the Commission from a Sterling Exchange Standard.

Does the Commission's offer to deliver gold (and not sterling) in London make it any different? Not when sterling is on gold. For, what the Commission has done is only to convert sterling that would be offered under a Sterling Exchange Standard into equivalent tolas of fine gold. Under a Sterling Exchange Standard the rupee would be redeemed in drafts expressed in pounds sterling, that is to say, in units containing 113·0016 grains of fine gold, and payable at the Bank of England, London. Under the Standard of the Commission it would be redeemed also in drafts payable at the Bank of England, London, but expressed instead of in sterling, in tolas, that is to say, in units of 180 grains of fine gold. The expression of drafts in units of 180 instead of 113 grains of gold does not make the Commission's Standard, a Gold Bullion Standard. On the contrary it involves not only inconvenience but also as observed above, a small additional expense in making remittances.

But, the difference between the two standards would be felt if and when the rupee decides to remain on gold while sterling is off it. This feat, however, would involve the Representative in India of the British Government in abstaining from taking action to relieve the Bank of England from paying out gold to the order of the Reserve Bank when his Principal in White Hall will have relieved it of its obligation under the law of redeeming sterling into gold, precisely because the Bank had not adequate gold for the purpose.

It is needless to discuss whether this is at all probable. Suffice it to point out that following England's departure from

gold the rupee was made to go with sterling and not with gold. As soon as information was received by cable that the British Government had decided to suspend the gold standard in England Section 5 of the Indian Currency Act, 1927, (needless though it would seem to have been if the object in view was suspension of the gold standard) was suspended by a Vice-Regal Ordinance.¹⁴ This suspension, it would seem, however, was done only in a state of panic. For, consistently with the supposedly offending section remaining in force, the rupee could have been redeemed in 18d. sterling instead of in 18d. gold or equivalent sterling. And accordingly the ill-merited suspension of this section was set aside subsequently.¹⁵

III

How does the Commission's standard differ from the pre-war currency system?

Before the war by a body of administrative practice or notifications of the Executive the exchange value of the rupee was kept within limits appropriate to a Sterling Exchange Standard. The sovereign being unlimited legal tender at £1 to 15 rupees, the rupee could not appreciate above 16d. by more than the cost of remitting sovereigns to India. Also a notification of the Secretary of State offering to buy sterling without limit at 16½d. a rupee, prevented the rupee from rising above this limit. And by an administrative practice, not always in full effect, of selling bills payable in London for rupees tendered in Calcutta, at a rate not more unfavourable than 1s. 3 $\frac{29}{32}$ d. per rupee, the rupee was prevented from falling below this limit.¹⁶

¹⁴ See Ordinance VI, 1931 (Gazette of India Extraordinary, September, 21, 1931) and the statement of the Finance Member in the Legislative Assembly on September, 21, 1931. *Assembly Debates*, 1931, Vol. V, p. 713.

¹⁵ See Ordinance VII, 1931 (Gazette of India Extraordinary, September 24, 1931) and Ordinance VI, 1932 (Gazette of India Extraordinary, January 30, 1932.)

¹⁶ See Keynes : *Indian Currency and Finance*, Chap. I.

It is obvious, therefore, that the Commission in effect did little more than attempt to perfect the Sterling Exchange Standard as it operated before the war. In the first place instead of the upper limit of the rupee being determined by the cost of importing little circular pieces of standard gold bearing the head of the King of England, the Commission would have it determined by the cost of importing bars of fine gold. But this was in a way only the logical consequence of the closing of the mint to the public in England. Secondly, the sale of drafts on London to prevent the rupee from falling below $(18-x)$ d. the Commission would put on a legal basis instead of a basis of administrative practice as was the case before the war. In the third place, the limit of depreciation of the rupee they would fix at the 'lower gold point' to be determined from time to time and not at a more or less arbitrarily fixed point of $\frac{3}{32}$ d. below parity.¹⁷

IV

Finally, how does the Commission's standard differ from the Gold Bullion Standard? We shall illustrate this difference by reference to the Bullion Standard established in France by the Monetary Law of 1928.

This law lays down that the Bank of France shall redeem its notes at its "Central Registered Office" and not in London, New York or Lapland in gold and not in titles to gold meant for delivery in these foreign centres, at 65.5 milligrammes of gold

$\frac{900}{1000}$ ths fine, per franc. Also, it requires the Bank to buy gold for francs at the same rate *minus* a small amount corresponding to the cost of coinage charged by the French Mint, namely 40 francs

¹⁷ Among the minor differences between the two systems may be mentioned (1) the demonetisation of the sovereign and half-sovereign, and (2) the abolition of the *legal* convertibility of paper into rupee coins.

per kilogramme of gold.¹⁸ This obligation to buy and sell gold is independent of the state of French Exchanges: the latter is meant to be determined by the former.

On the analogy of the above under the Gold Bullion Standard the Commission's Reserve Bank should redeem rupees, in gold at its Bombay Office at 8.47512 grains of fine gold per rupee and buy gold in Bombay at the same rate with or without a deduction corresponding to the cost of coinage. These obligations should be incumbent upon the Bank irrespective of the state of exchanges which it is their purpose to determine. Or to put it in the language that the Commission has found convenient, the Reserve Bank should sell gold in bars of approximately 400 ounces (1,065 tolas) at Rs. 21-3-10 per tola of fine gold, and buy gold at the same rate with or without a deduction corresponding to the cost of coinage.

The Commission's selling rates (they have more than one selling rate!) of gold, however, are different from the above. They are made to be dependent upon the state of the exchanges instead of themselves being responsible for determining it and are appropriate only to a Sterling Exchange Standard.

The difference between the Gold Bullion Standard and the Standard of the Commission becomes apparent in the difference between the limits within which the exchange value of the rupee can fluctuate under the two standards. This we shall attempt to indicate as follows:

Let capital letters A, B, C, etc., represent the foreign countries on gold and small letters a, b, c, etc., the cost of transporting bullion from Bombay to these respective countries, in d. per 18d. gold. Then, under a Gold Bullion Standard the limits within which the exchange value of the rupee can fluctuate in terms of currencies of A, B, C, etc., (all of which for the sake of convenience we shall express in terms of sterling) would be $(18 \pm a)d$, $(18 \pm b)d$, $(18 \pm c)d$.

¹⁸ This summary is based on Legislation on Gold (League of Nations, 1930) pp. 229-30.

But under the Commission's Standard while the upper limits of the rupee would be the same as under the Bullion Standard the lower limits would be $(18 - \bar{x} + \bar{a}')d.$, $(18 - \bar{x} + \bar{b}')d.$, $(18 - \bar{x} + \bar{c}')d.$, etc., where a' , b' , c' , etc., represent respectively the cost in d. per 18d. gold of transporting gold from London to countries A, B, C, etc.

That is to say, under the Standard of the Commission as under a Sterling Exchange Standard, the rupee might depreciate by $(x + a' - a)d.$, $(x + b' - b)d.$, $(x + c' - c)d.$, etc., lower than under a Gold Bullion Standard. To this extent, therefore, the cost of making foreign remittances on Indian account might be higher, i.e., the Commission's Standard might involve a more costly mechanism of gaining access to foreign currencies than a Gold Bullion Standard.¹⁹

V

We may next examine the standard established under the Currency Act, 1927. The main features of this Act relevant to our discussion may be stated as follows:—

(1) The Governor-General-in-Council shall sell,

(a) gold for delivery at the Bombay Mint at Rs. 21-3-10 per tola of fine gold in amounts not less than 400 ounces of fine gold;

or, at the option of the Controller or the Deputy Controller;

(b) Sterling for immediate delivery in London at $(18 - x)d.$, a rupee also in amounts not less than the value of 400 ounces of fine gold.

(2) The Governor-General in Council shall buy gold in Bombay or at any other notified place in amounts not less than 40 tolas at Rs. 21-3-10 per tola of fine gold.

But for the option under provision (1), the standard of the 1927 Act would have been a perfect Gold Bullion Standard. This option,

¹⁹ See Footnote No. 9, p. 191.

however, renders it a Sterling Exchange Standard. Under Exchange Standards, it is the usual practice to-day to give the currency authority concerned the option of redeeming its currency in gold or exchanges.²⁰

This offers an inducement to the currency authority to maintain its reserves in the form of exchanges rather than in gold. For, while the former would yield an income in the form of interest the latter would yield none. Naturally, therefore, the local currency would then be normally redeemed in exchanges and not in gold. This would make it an Exchange and not a Bullion Standard.

But, under certain circumstances it would appear that it is convenient and advantageous to redeem the currency in gold rather than in exchanges. For, when the exchanges of a country Y on a Gold Exchange Standard are at the gold import point from one or more countries A, B, C, etc., gold would be flowing into it from the latter. If simultaneously with (or subsequently to) this the exchanges of Y touch the gold export point to one or more of countries K, L, M, etc., then, it would be convenient to meet the demand for remittances to the latter in gold rather than in exchanges. Redemption of the local currency in exchanges would then involve the depletion of interest yielding reserves and the accumulation of non-interest yielding gold. Also, the conversion of this gold into exchanges later would involve the expenses of transporting it.

If country Y is on a Sterling Exchange Standard like India redemption of the local currency in sterling, when sterling exchanges are at the gold export point from England, would entail the exerting of a greater pull on the reserves of the Bank of England. By releasing whatever gold there may be in the

²⁰ The currency authorities of the following countries on Exchange Standards enjoy this option : Albania, Belgium, Bolivia, Chile, Czechoslovakia, Ecuador, Finland, Guatemala, India, Italy, Latvia and Peru.

reserves instead of sterling, in Bombay, the Bank of England could then be relieved of a corresponding embarrassment.

VI

To summarise our conclusions. The currency standard of the Hilton-Young Commission was only a Sterling Exchange Standard dressed up. And, on reading the Commission's excellently worded report one cannot help thinking that the conversion of sterling drafts appropriate to a Sterling Exchange Standard into drafts of equivalent tolas of fine gold for delivery in London, valued at so many rupees, annas and pies; the limitation of minimum deliveries to 400 ounces after the fashion in England; the offer of gold at parity in Bombay only on occasions when no one would ask for it; its offer at other times at a price acceptable to none; the elaborate eulogising of the virtues of the Gold Bullion Standard;²¹ the ready acceptance of even the far-fetched objections to Exchange Standards advanced by Indian critics of such standards;²² and finally, the solemn christening of their standard as the Gold Bullion Standard²³ were all parts of the golden apparel used, it must be conceded, to the credit of the Commission with successful results.

In putting their dressing on it, however, they made possible the depreciation of the rupee by a trifle below the lower limit proper to a Sterling Exchange Standard. Ignoring this there is little to distinguish the Commission's standard from a Sterling Exchange Standard. It was not a Gold Bullion Standard. It was only an attempt to perfect the pre-war currency system.

In 1927, the larger part of this elaborate apparel was quietly removed and until September, 1931, (as after it) the rupee was not on a Gold Bullion Standard, but on a Sterling Exchange Standard.

²¹ Paras. 59 to 63.

²² Paras. 25 and 29 to 32.

²³ Para. 59.

INDIA AND THE SILVER QUESTION

BY

A. RAMAIIYA

INDIA'S INTEREST IN SILVER

To understand the nature and extent of India's interest in the problem of silver it is important to note at the outset that she is not a producer of silver except to the extent of a few million ounces per year, and even this production is mostly under European ownership. So that it will be substantially correct to deal with her position as that of a holder and consumer of silver merely.

The total stock of silver (both monetary and non-monetary) in India may now be said to exceed roughly 15200m. ounces, making due allowance to loss by wear and tear through the ages. In 1925 the stock was estimated by Mr. Joseph Kitchin at 4550m ounces, and the subsequent net imports down to date (from 1925 to 1932) after making due allowance to the Indian Government's sales of silver during these years come to about 650m ounces. It is not enough to know the quantity of the stock. Its gold value at present in the world market at the rate of 28½ cents an ounce comes to 1482m. Dollars, which converted at the statutory rate of exchange of \$.3650 per rupee is equal to about 410 crores of rupees. Nor is it enough to know the present value of the stock. Only if we see the total actual cost at which the various quantities purchased by the country for a long series of years, have been acquired, we can realise the huge loss caused to India by the continued depression in the price of silver during recent years. To have an idea of the magnitude of the loss it is enough if we start with the year 1893 when the silver standard was abandoned by the Government of India and the mints were closed to silver. The

total consumption of silver by India from 1493 to 1893 is according to Mr. Kitchin 2626m. ounces and its value £ 667m. or 1000 crores of rupees. Subsequent net imports of silver into India down to 1924 have been calculated by the same authority at 1980m. ounces at a cost of £ 275m. or about 410 crores. Since 1924 down to March 1932 the net imports (after deducting Government sales outside India) have amounted to more than 650m. ounces, valued at about 90 crores of rupees. Thus the prices paid for the various quantities of silver acquired from 1893 to 1932 plus the actual value of the stock when India went off the silver standard in 1893 amount to 1,500 crores of rupees. Compare with this their realisable value at the present price of silver, viz., 410 crores, and we have an idea of the magnitude of the depreciation of silver and the loss to India thereby.

But this loss is to a large extent only notional. An analysis of the nature and extent of the various classes of holdings in India will show that a large part of them may literally be termed 'frozen wealth' in the sense that it cannot in any way be affected by the depreciation or appreciation of silver.

As there is a good deal of misunderstanding both in India and foreign countries about the nature and extent of the private holdings of the Indian people in gold and silver I take the liberty to discuss the matter in some detail here.

The entire gold and silver stock in India may be classified as follows:—

1. Government Reserves. (Value in rupees) as on 30-4-1933:

(i) coin,

(a) Silver—95,92,20,482.

(b) Gold—nil.

(ii) bullion,

(a) Silver—15,96,44,885.

(b) Gold—26,40,43,639.

2. Coins in actual circulation as Currency :

- (i) Silver—250,00,00,000 (estimated).
- (ii) Gold—nil.

N.B.—There have been no gold coins in circulation in India under British rule, but before the Great War, till 1914 British gold sovereigns and half-sovereigns were circulating as currency to some little extent, and were legal tender though the Government was under no obligation to issue them on demand.

3. Private hoards or holdings of gold and silver coin, bullion, etc. :—

(i) *With Bullion dealers.*—The stocks with these people are floating, to some extent speculative and varying in quantity from day to day.

(ii) *With the Indian Princes and Zamindars.*—These are the wealthiest classes of people in this country and the Ruling Princes alone number 562. Their hoards and holdings consist of rupee coins, gold coins such as the British sovereign and half-sovereign and the American 10 dollar and 20 dollar pieces and gold and silver jewellery, utensils, decorative ornaments and things of that sort required for pomp and show. It is not possible to estimate the extent of these though they are believed to be fabulous. One Ruling Prince alone is said to have a private hoard in coin and bullion worth more than Rs. 10 crores and his jewellery valued at Rs. 200 crores. Under a modest estimate we may value (at cost) the possessions of this class of the population as follows :—

Gold (mostly in the form of jewellery and hoards of British sovereigns, and half sovereigns, and U. S. A. 10 and 20 dollars coins) ...				250 crores.
Precious stones (including pearls, etc.) ...				200 crores.
Silver-utensils and ornaments kept for pomp and show (about 1000m. ounces ...				100 crores.
Rupee Coin	...	...	...	50 crores.

(iii) *With other people.*—Here a distinction has to be made between the richer and middle classes on the one hand and the poorer population on the other. While all alike hoard rupee coins, gold in the form of jewellery is mostly held by the richer and middle classes who use silver only for making household utensils. The poorer classes have few gold jewels and few silver utensils while almost the whole of their personal ornaments are only bangles, anklets, and things of that sort made of silver. In the case of all classes the wearing of jewels is confined mostly to women and children who, whether rich or poor, ought according to social custom and religious usage to have on their bodies (neck, ears, etc.) certain “necessary ornaments”, made of gold or silver according to the means of the wearer’s family. No degree of depreciation in the value of gold or silver in the market will have effect on the sense of feeling of the wearers of these jewels and no offer of a high price will induce them to part with the jewels for the sake of the bullion value. With regard to their other jewels which are worn solely for the sake of display and which may be termed ‘luxury jewels’ the effect of a rise in price in the bullion market will be to attract them to the market for sale. As they are also brought to the market to be turned into cash in time of need, a fall in price of gold or silver as the case may be, may affect their sense of their own worth and through that their purchasing capacity. No clear-cut distinction can, however, be made between necessary and luxury jewels for the whole of India.

Sir Basil Blackett estimated the private hoards of the people of India at Rs. 100 crores. (See Evidence before the Indian Currency Commission, Vol. IV, Q. 10309); but it appears to me to be a gross under-estimate. As he himself said it was a mere guess and no more. Having closely observed many different classes of people in various parts of India, I venture the following estimate (though I must also confess that it is a mere guess and no more, though perhaps based on wider local knowledge and closer observation):—

Coin in hoards	...	100 crores of rupees.
Silver ornaments and utensils	...	150 crores.
Gold jewellery (mostly held by the upper and middle classes)	...	300 crores.

A good part of the gold and silver holdings of the people (including the Princes and Zamindars) was acquired during recent years when both the metals were selling cheap, and the recent exports of gold from India after the Gold Standard was suspended in September 1931 are to be traced partly to the floating stocks of bullion dealers and partly to the stocks of luxury jewels held by the richer and middle classes. The high price at which gold has now been selling, combined with the belief that the price must sooner or later go down, has induced these people to part with a portion of their gold holdings at a profit.

(iv) *With Temples, Mutts, etc.*—Economists both Indian and foreign have not paid attention to the enormous wealth held by religious trusts in India. An estimate made by the present writer, on the basis of information (not however quite accurate or complete) supplied to him by the President of the Madras Hindu Religious and Charitable Endowments Board a year ago showed that in the Madras Presidency alone the number of Mutts, Temples and other places of worship exceed 500,000, of which at least 30,000 held income-yielding properties and jewellery of enormous value. There is no hoarding of silver coin or bullion as such by them. All their silver and gold holdings exist in the form of decorative ornaments and things of that sort. Many of the Hindu idols themselves are wholly or partly made of gold or silver. Canopies, and Cars, *Vahanams* and other vehicles in which the idols are taken in procession, the jewellery of the Gods, the crests (*Sthupis*) of the inner shrines of temples, utensils used for purposes of worship on festive occasions and other paraphernalia are all in very many cases made of silver or of silver with gold coating. The total value of their properties (exclusive of their buildings

which might have cost at least 500 crores of rupees) will on a modest estimate come to at least 175 crores of rupees—the value in the case of their gold and silver possession representing cost of acquisition and not present market value. Thus:—

Landed Properties	...	100 crores.
Silver holdings	...	30 crores.
Gold holdings	...	20 crores.
Ornaments with precious stones	...	25 crores.

This is for the Madras Presidency alone, which is in area and population one-twelfth and one-fifth respectively of the whole of India. Making allowance for the fact that Madras contains a larger number of Hindu Temples and Mutts than any other Province in India, we shall not be far from the truth if we make our estimates for the whole of India at four times those for Madras, which will give the following figures:—

Landed Properties	...	Rs. 400 crores.
Silver	...	Rs. 120 crores.
Gold	...	Rs. 80 crores.
Ornaments and Jewellery	...	Rs. 100 crores.

The more gold and silver go down in price the greater is the absorption of them for temple purposes. Not only are the funds of the temples utilised for such purposes but large numbers of religiously-minded Hindu men and women, village communities and other social organisations purchase from out of their private and common funds large quantities of gold and silver, make jewels, utensils, *Vahanams*, Cars and other paraphernalia and present them to the temples for the use of the Gods they want to glorify. To my own knowledge during the past five or six years owing to cheapness of silver, many South Indian temples which previously had only wooden *Vahanams* and utensils for the use of their

deities have gone in for silver and gold-plated ones. Whether rich or poor, whether possessed of private property or not the Hindus of the orthodox type have a passion for building temples, endowing them with properties, and adorning their gods with ornaments of gold and silver, the extent of which cannot be imagined by non-Hindus especially foreign Christians. When once gold and silver are absorbed by the Hindu temples and Mutts, they become inalienable trust property which cannot be attracted back to the bullion market even by a 1,000 per cent rise in the prices of these metals. They are for all practical purposes absolutely 'frozen wealth' incapable of being affected by the market price in any way.

So that now in respect of the hoards and holdings of silver in India the facts are:—

(1) That apart from the stock of rupees in Government Reserves and in circulation, the quantity in the hands of the hoarders (Princes, Zamindars and people) amounts to Rs. 150 crores. Here, though the rupee is silver coin, the hoarders are not affected by the fall in price of silver in the sense of its diminishing their purchasing power as the rupee is legal tender currency, and is expected to continue to be so. The fact that the silver content of the rupee has considerably gone down in terms of its currency value, may have a psychological effect on the hoarders and shake their confidence in it, but their greater confidence in the permanence and credit of the Government of India and in the legal tender character of the rupee issued by it has made them resort to it as a reliable material of value for hoarding purposes. The only thing necessary is that the Government of India should continue to maintain its credit as Currency Authority, possibly, among other means, by preventing the price of silver falling below a particular point. To this extent then, the Government of India may be said to be interested in the silver question.

With regard to the silver in Government Reserves, so long as the Government does not propose to dispose of any more quan-

tity than it has already done (and it need not dispose of any further quantity at all), they have also a vital interest and responsibility in respect of the matter. They had acquired their silver for coinage purposes, at far higher prices than it is selling now. From 1893 down to 1920 (after which time they stopped further purchases) they purchased 829m. ounces of which 327m. ounces were got between 1915 and 1920 at prices in the neighbourhood of and ranging up to 102½ cents per ounce. In its own interest it is the duty of the Indian Government to see that the value of the holdings in its Reserve as well as the silver content in the rupee does not depreciate below a certain point in terms of gold, say eight annas per tola or 39.5 cents per ounce at the par rate of 36.5 cents per rupee.

(2) That so far as the Indian Princes, Zamindars and richer classes of the people are concerned they will not ordinarily be affected by the depreciation of silver as neither their spending capacity nor financial strength depend on their silver holdings which after all form a very small proportion of their wealth. In the case, however, of the other people (the middle and poorer classes) the price of silver in the market does really affect their purchasing power. A portion of their wealth is invested in silver, and in the case of the poorer classes who form at least two-thirds of the population of the country, i.e., about 220 millions, the proportion is very high. A heavy fall in the price of silver does make these people feel that their possessions are less valuable than before, and through that feeling diminishes their purchasing power. They generally regard the ornaments on their women as a store of value, a reserve of power to fall back upon in times of distress. Not unoften do they turn their little holdings into cash in times of need. In such cases a depreciation in the value of one's holdings and the consciousness of such depreciation must inevitably react on one's own estimate of one's financial position and purchasing power. There is nothing more depressing upon the mind of a person than finding that the savings which he put aside

two or three years ago are now worth not more than half of what they were then. It acts as a real check on his purchasing power.

To summarise, 1.—The Government of India as Currency Authority having purchased large quantities of silver at very high prices for coinage purposes has a responsibility to protect the country against serious losses through depreciation of the Currency Reserve and for seeing that the silver content of the rupee does not fall in value below a particular point, say 8 annas per tola (a weight equivalent to 4114 oz.). 2. India is interested in rehabilitating silver in order that the stocks of the metal amounting to more than 1000m. ounces held by the middle and poorer classes of her population may get enhanced in value and thereby increase their purchasing power. And as the people concerned are a very large proportion of the population, this interest is a vital one.¹

It will be seen from the foregoing that the interest of India in the silver problem though considerable is not so much as often exaggeratedly stated on the basis of the total stocks of silver held in India.

But she has another interest in relation to the matter and that is in increasing the purchasing power of the two silver standard countries, China and Afghanistan. With these India has an appreciable trade which is steadily increasing and capable of much development in the near future and if the savings of the people of these countries, which are to a large extent kept in the form of silver coin and bullion are enhanced in value, and their currencies put on a sound international basis by effecting a fixed ratio with gold, the trade of India with them will be greatly facilitated. As the bulk of China's trade is with gold or gold exchange standard

¹ Perhaps the interest will be a steadily growing interest. The people may also in future years continue to absorb enormous quantities of silver in the forms in which for ages past, they have been doing. There are comparatively few banks in the country and these are confined to the cities and larger towns while most of the population live in villages. The average peasant having no safe place in which to put his little savings, invests them in land, silver and gold.

countries, it would appear that unless these other countries also give a place for silver in their currency systems or at least recognise it as a functionary in the balancing of international payments, some kind of exchange standard based on the currency standards of the other countries (not at all an easy matter) will be necessary for China.

Why Silver has Fallen in Price.

Compared with gold, compared with the movement of general prices, the price of silver has fallen very heavily within the last two years or more. The lowest price ever reached was 26.5 cents per ounce or so, on 9th January, 1931 and though the price has since that date shown some recovery it is still very low, now standing at about 28½ cents per ounce. The price in the pre-war year was in the neighbourhood of 56 cents. In other words the ratio of silver to one unit of gold was 34.2 in the pre-war year, 78.9 in January 1931 and at the present time 73 or so.

Now apart from the part silver has played as a factor in the present trade depression, its effect on the savings of the Indian people has been enormous. By its croaking, it has within a few years reduced the value of the silver holdings in India catastrophically. Although the depreciation of their holdings does not and cannot affect the economic position of the Temples and Mutts, and of the Indian Princes, Zamindars and other wealthy folk, it has had a disastrous influence on the wealth-position and purchasing power of the middle and poorer classes of the people of India, who hold among themselves more than 1000m. ounces of silver, acquired at a cost of nearly 100 crores of rupees. Their whole sense of their financial position has been altered by the fall in value of a good portion of their savings, which they have always looked upon as a reserve of power to be resorted to in times of need or distress. Though, thanks to the Government of India, this has been to some extent remedied by the imposition of an import duty on silver and thus raising the internal price of the metal, yet in

my view, the great fall in the price of silver is one of the primary causes of the diminution in the consuming capacity of the Indian people. An appreciable rise in the world price of silver plus the continuance of the existing import duty must have a wholesome effect on the economic position of the Indian population.

What now are the causes for this catastrophic fall in the price of silver? Though various people attribute it to various factors at work, to my mind the following appear to be the important causes:—

(1) The demonetisation of silver and the adoption of some form of gold standard in many countries and the general aspiration of all the countries of the world towards the gold standard as the only suitable form of international currency completely discredited silver as a metal worthless for monetary purposes. This attitude of the world has acted in three ways in reducing the price of silver: (a) by practically extinguishing the monetary demand for the metal, (b) by increasing the monetary demand for gold and thus depressing the price of silver in terms of gold and (c) by psychologically adversely affecting the non-monetary demand for silver as less merited for social uses on account of its growing cheapness and therefore inferiority.

(2) Further many European countries—Great Britain, France, Germany, Italy, the Netherlands, Austria and Hungary debased their subsidiary coinage by reducing the silver content therein to a considerable extent and also substituting nickel and other baser metals in the place of silver token coins. This not only greatly diminished the demand of these countries for silver for token coinage but led to the glutting of the market with their surplus silver, thus having a disastrous effect on the price of the metal. Great Britain by reducing the fineness of her silver coins from .925 to .500, released between the years 1920—29, 95m. ounces selling on an average 9m. ounces per year instead of buying annually 21½m. ounces as before debasement. Similarly, France and Belgium sold 87m. ounces during 1927—31 and Indo-China 50m. Taking

these with the India Government's sales of silver from its Reserve at an average of 67m. ounces per year, it may be readily imagined what a tremendous effect these factors must have had on the market.²

(3) Of particular effect had been the adoption of the gold standard by India and the pursuit of a policy of sale of silver by the Government of India as part of the Gold Standard policy. The Currency Commission (1925-26) recommended the gold bullion standard at the ratio of 1s. 6d. gold for the rupee; and stated that "the coinage of silver rupees should be stopped for a long time to come until the amount of silver rupees in circulation is reduced to the amount required for small change" (p. 29 of the Report); and for the successful working of the gold standard it recommended as part of the scheme the gradual diminution of the silver reserve which at the time of its Report stood at 84 crores of rupees (293m. ounces) to 70 crores by the time the Commission wanted the Reserve Bank to be established (which was to be as soon as practicable) then to 50 crores three years later, then to 35 crores six years later, and finally to 25 crores (86m. ounces) ten years later. But as soon as the Gold Standard was established, the silver reserve increased from 85 to 110 crores of rupees by the beginning of 1928 and since then despite the disposal of 30 crores (which, however, it may be noted was not effected for the purpose of the Reserve Bank which did not come to be established but for the purpose of meeting budgetary requirements) the reserve rose to 129 crores (443m. ounces) in 1931 and now stands at 112 crores (385m. ounces).

² "Between 1914 and 1929, both inclusive, no less than 31 countries debased or demonetized their silver currency. The amount of metal derived from these operations from 1920 to 1930, both inclusive, is estimated to be well in excess of 400,000,000 ounces." (Statement on 'Silver' issued by the Hon. Andrew L. Somers, in the House of Representatives on February 25, 1932, page 2, para six.)

Parenthetically, it may be interesting to note here the reason for this return of silver coins to the Reserve as soon as the Gold Standard was established. As we saw before, there have been large hoards of silver rupees among the people of India of all classes. Taking advantage of the cheapness of gold which could now be had at the ratio of 1s. 6d. gold per rupee (fixed by Statute in 1927) and seeing that gold was increasingly assuming importance as international currency, while silver was daily depreciating, the hoarders of rupees began to substitute gold in the place of a portion of the silver rupees which they had hoarded. While the rupee was only legal tender in India, gold was international legal tender so to speak. In less than 5 years 1926—31, from out of 360 crores of silver rupees believed to be in circulation or hoards, 117 crores returned to the Treasury. It is largely this newly absorbed gold that came back to the market again for export when the price of gold rose high after the suspension of the gold standard in September 1931.

The result of the India Government's currency policy was cumulative. By stopping fresh coinage of silver after 1920 it removed one important factor of demand from the world market. By adopting the gold standard it increased the demand for gold and by announcing a policy of silver sales and partially carrying it out in an already depressed market it annihilated all hopes for silver. More than the sales, the expectation of future sales which might take place at any moment, had a disastrous effect. It was only in February 1931 that the Finance Member definitely stated that the Government of India had no fresh contracts for sale from middle of February 1930. But nobody knew before February 1931 that the Government would not at any time be coming to the market with its offers for sale. It may be noted that after the statement of February 1931 the price of silver has somewhat improved.

(4) Other contributing causes for the fall of silver may be said to be (i) the announcement of a gold exchange standard for

China—it is hardly necessary to point out the psychological effect of the mere fact of such an announcement, on the market; (ii) the large stocks of silver left with bankers in Shanghai for safe-custody which increased from 108m. to 215m. ounces between December 1927 and January 1931, though it had no direct effect on the price of silver, had a bearish influence on the market; (iii) the competition and substitution in the industrial arts, and particularly in India among the poorer classes, of imitation ornaments and articles made of rolled gold, electroplated gold, etc., in the place of silver ornaments. This competition is steadily growing and in India at any rate is by no means negligible.

As matters stand at present, there is a general world opinion that silver has no future. Except for use in the industrial arts (where the cheapness of prices does not greatly stimulate demand as the cost of labour is large) and possibly in the motion picture industry where there is a growing though small demand for it in the form of silver nitrate, silver has no utility for the world. As a store of value and for hoarding purposes it has been found unreliable, though for no fault of its own. For monetary purposes even for subsidiary coinage it has been disqualified by all governments. While this is the situation on the demand side, the conditions of production of silver are such that its supply cannot adjust itself to changes in the demand for the metal. About 70 per cent of the world's output of silver is produced not for its own sake but as a bye-product of baser metals—copper, lead and zinc, the production of which from the point of view of the world's demand for them and therefore of the miners is more important than the production of the bye-product. The result of this is that the output of silver to this extent is forced upon the market irrespective of demand. With regard to direct production from dry and siliceous ores, here also in view of the large amounts of capital invested in their mines, the production has to continue in order to minimise the loss as far as possible. This means that the

production is to a large extent inelastic and not much affected by the price of silver.³

So far as the internal price of silver in India at present is concerned some special circumstances have to be noted which are keeping it at a fairly reasonably high level. The Bombay price is now Rs. 57-12-0 per 100 tolas, i.e., Rs. 1-6-6 per ounce, while the New York price is 28½ cents per ounce. The special circumstances are, (i) after the suspension of the gold standard in India following Britain, the rupee has been linked to sterling and therefore depreciated along with sterling in terms of the gold prices of the United States of America and other gold standard countries; (ii) the imposition of an import duty of 6 annas per

3. To the extent of about two-thirds of the output silver is not won for its sake alone, but either as a bye product or in conjunction with gold. If a substantial fall in the price of silver were to take place any consequent curtailment of the output would hardly affect the base metal product at all, would have more but still little influence on the production from gold ores, and would have its chief effect on silver ores, i.e., upon 37 per cent of the silver production. Even here the effect would be smaller than might at first sight be expected, because, in cases where the profit is sufficiently large to leave a favourable balance at the lower price level, production would continue, and might even be stimulated in the attempt to maintain the aggregate profit, and in cases where the profit was wiped out the mines would struggle to continue their production as long as possible. The latter remark applies to existing mines, but of course, the reduction in price would tend to strongly discourage the opening up of new ones. It must also be remembered that mining is not subject to the usual rules by reason of the glamour associated with it, so that a mine is usually not shut down when it becomes unprofitable to work it until necessity, in the shape of refusal to keep up the supply of further funds, compels cessation of operation." (Statement of Evidence of Mr. Joseph Kitchin submitted to the Royal Commission on Indian Currency and Finance, 1926. Report, Vol. III. App. 82, para. 34, pp. 527-28.)

"It seems clear that because of the large amounts of funds now invested in silver, copper and lead mines, and the technical difficulties in closing and re-opening mines, that production would be sluggish in reflecting changes in the demand for silver. This means that the production of silver is comparatively inelastic." (Para XVI of Summary of Reports submitted by Mr. Arthur Notman and Captain H. A. C. Jenison to the Royal Commission on Indian Currency and Finance. Vol. V, p. 284.)

ounce has increased the internal price of silver almost to the full extent of the duty. The effect of these factors is to maintain the value of the Indian holdings of silver and therefore the internal purchasing power of the Indian people, at a higher level than they would otherwise be.

What must be done.

1. It will be seen from the foregoing that if the idea is merely to increase the value of silver as a commodity, then it may not be considered very important for India to take part in any international conference or agreement. For, the interest of this country being only that of a holder and consumer, an increase in the value of silver for the purposes of the Indian people, can be sufficiently achieved, as it has already been to a large extent achieved by means of an import duty. Though the original object of the existing duty was to enable the Government to dispose of their silver at a high price, the effect of the imposition is to enhance the price of the metal in the Indian market to an extent almost equal to the import duty. In the interests of the country the only thing wanted is to make the duty permanent so that the wealth-value of the silver holdings of the people may not be diminished. There is no reason why the duty should not be continued for any length of time. It is from the point of view of all interests in India an eminently non-controversial matter. Whether the duty yields a sufficient revenue or not is a secondary question. Lower prices outside India will not in any way affect the position of India, except that it will perhaps lead to greater inducement to smuggle silver in large quantities. Perhaps if the import duty is too high such as to create a great difference between the Indian and world price of silver, it may also shake the confidence of the people in silver as a safe investment or hoard. But the duty as it is is reasonable and has an excellent effect.

An effort merely to fix the value of silver at a price higher than the prevailing market price is beneficial for all practical

purposes only to the producers of the metal. In that view only United States of America, Canada and Mexico, the three largest silver-producing countries stand to gain, perhaps United States of America more than the others because it is there in the dry and siliceous ores production that it is unprofitable to a large extent.⁴

But so far as the Government of India is concerned, a willingness for joint action even with regard to regularity of sales for meeting the world's demand has been as long ago as March 1, 1930, expressed by the Finance Member of the Government of India, Sir George Schuster. He said, "I am prepared, on behalf of the Government of India as important holders and producers, to say that, if the other interests concerned show any desire to consider the possibility of joint action for the regulating of sales in order to meet the world's demand, the Government of India would willingly co-operate. Further than this we cannot in the public interest go, but what I have said amounts to a carefully considered and important proposal, and it is for the other producing interests to consider if they will make any response." A year later, in his Budget Speech delivered on 1st March, 1931, he had regretfully to express: "Unfortunately the only response to my offer has been on the lines indicated in certain utterances which have appeared in the press by representatives of the main producing interests in America. In general, these gentlemen propose that their own production of new silver should remain unrestricted, but that governments and others, who hold large stocks of

⁴ Production in 1929. Out of a total of 261,715,021, North America produced as follows :

Canada	...	...	23,143,261
U. S. A.	...	...	61,233,321
Mexico	...	...	108,700,372
Total	...	..	193,076,954 oz.

i.e., more than 73.8 per cent or nearly three-quarters of the total world production.

silver should refrain from realising their holdings, and leave the world's markets free for the new production. Now, whatever criticisms non-official members in this House may have made in the past on our policy of selling silver, I am sure that they would not expect the Government of India to part with the country's rights by acceding to any such one-sided arrangement." These words are as true to-day as when they were uttered, and they faithfully represent the attitude of India.

Cui Bono.

When we consider the feasibility of an agreement between the producing interests and the Government of India with a view to control the production and sale of silver to their mutual advantage, we find that unless some scheme of international price control is adopted, such as to ensure the benefits of the arrangement to all of them, a proposal merely urging that the Government of India should postpone its sales for some years will be a positive loss to this country. In that case, as pointed out by Prof. Findlay Shirras in a recent article published in the *Times of India* (Bombay), the Finance Member of the Government of India may well say, "You ask me to suspend for a period to be fixed with the producers and with reference to a given price for silver, all the silver that I do not want in the Paper Currency Reserve. But will India gain? When the period agreed on expires there will be more silver as a result of this agreement because the price having been raised there will be an impetus to production."

"The upshot of the whole matter is this: For some years silver will be higher in price as a result of my agreement with the producers you mention, but during this period I must not sell. During the period of abstention other sellers would be benefiting by any strengthening of price so produced. When the time comes for me to sell again the price of silver will, from the fact that a big seller is again in the market, depress the price and this is just when I must again sell my silver. Other things being equal

India would be likely to find itself selling on a falling market."

"It would be impossible for the producers, to take off my hands thirty million ounces a year at a really good price. The producing interests already find it necessary, in spite of the trade depression, to sell as they produce. Presumably, they cannot afford to hold up even their own stocks. Still less would they be able to hold up additional stocks of 30 million ounces a year taken from us. They would be therefore obliged to market this additional amount every year, and the effect, in my opinion, on the price of silver would almost certainly be much more depressing than even if I were to sell the same amount on an average each year since the Government of India is in a position to be a firmer holder and to space its disposals so as to fit demands."

"If the producers considered offering me a price they would have to take the fact just mentioned into account and to provide themselves with a margin to cover uncertainties. The net effect would be that the silver market would gain no advantage, and this country would receive a lower price for its silver."

2. The aim of international effort, as I understand it to be, is to relieve the world of the present depression by giving silver a status in the monetary systems of the world, through remonetising it in one or more forms and saving the world from gold scarcity. Silver is to have a fixed ratio to gold, at a level higher than the one based on the present market price of silver which is about 28½ cents and bears a proportion of 1/65 or so to gold.

Suggested Methods.

The methods suggested for improving the position of silver are:

- (i) that all countries should adopt bimetallism—a full gold and silver currency standard under which the legal tender face value and intrinsic metallic content value of silver as well as gold will be equal;

- (ii) that all countries should permit silver as part of their Central Reserves;
- (iii) that all countries should take in and use silver for their subsidiary coinage;
- (iv) that the creditor countries (especially the United States of America and France) should permit payment of debts due to them from other nations, not in gold alone, but in silver as well as gold.

Now with regard to each of these suggestions:

(i) Bimetallism.

1. This may not be agreed to by countries other than those having a vital interest in silver.

2. It is not necessary in the case of countries normally having a favourable balance of trade and in this aspect, United States of America herself may not possibly like the idea.

3. The adoption of bimetallism may lead to such a great monetary demand for silver as to upset any ratio that may be fixed. The price of silver may appreciate to a greater extent or it may depreciate. The production of silver being to a very large extent dependent on the production of baser metals its supply is as likely to be excessive as short, and in any case the ratio may be disturbed.

4. Even if bimetallism is adopted unless there is a radical change in the policy of creditor countries both gold and silver are as likely to accumulate in their reserves, as gold alone has done now. To take a single instance, the foreign indebtedness to United States of America is now about 19,000m. dollars. Further there is an annual balance due to her in trade. If United States of America insists on the liquidation of these liabilities, the entire stock of gold and silver may be absorbed by her in a score of years. If other creditor countries follow the same policy, the entire gold and silver will get into them.

Unless the creditor countries adopt a continuous policy of investment abroad, neither gold monometallism nor gold and silver bimetallism will be a sufficient cure for the financial ills of the world. The adoption of bimetallism may only postpone the catastrophe for a number of years.

Under existing conditions it is not likely that bimetallism will be agreed to by U. S. A. or any other country. Almost all the countries of the world have now banished silver from their currencies. Till September 1931 when England suspended the gold standard and along with her many other countries, almost all the civilised countries of the world had adopted one or other form of the gold standard. Even China had a gold basis for certain purposes such as the collection of import duties, etc.

The suspension of the gold standard has not turned the attention of these countries to silver but to a system of "managed currency" based on their own national credit.

The international mind has not turned to the question of bimetallism so far. On the other hand there is an agitation for demonetising gold also and adopting a "managed currency" as the most proper solution for all troubles.

Further the universal adoption of bimetallism may take a longish time, though its adoption by the most important countries of the world may be achieved quickly. If a metallic monetary standard is to exist, bimetallism is certainly superior to monometallism.

(ii) Silver as Part of Currency Reserves.

A statement on 'Silver and Gold' issued by Sir Robert Horne on behalf of the Silver Association of London on November 17, 1931, urges that "prompt consideration should be given to the suggestion that his Majesty's Government, with the support, if possible, of the Dominion, should convene or agree to participate in an international conference on silver with a view to its reintroduction into the world's monetary system. As a first step the central

banks might be authorized to keep a percentage of their metallic currency reserve in silver, which would then become freely available for payment of international differences as well as in support of domestic currency reserves. The metallic basis of credit would thus be expanded and the level of commodity prices raised and kept higher and more constant than would be possible with gold alone."

From the point of view of the position of silver itself, if the Central Banks and Governments of to-day which now hold 12000m. Dollars of gold, can be made to hold also as part of their reserves 100, 150 or 200m. Dollars each in silver, it will have a decided effect on the price of the white metal.

This is an easier thing to do, and the lead may be taken by the U. S. A. herself. The adoption of a bimetallic Reserve by the U. S. A. will have the effect of releasing a portion of the gold locked up in her Reserves, bring down the price of gold, and enhance the price of silver—all conducive to the revival of international trade. Even if no other country joins her, the sole responsibility of U. S. A. in this matter will set things right—for she is the greatest financially powerful factor in the world to-day. England and other European countries will follow suit and India will be only too ready to adopt the policy.

Even if the U. S. A. solely adopts or some or many countries jointly agree to constitute their currency reserves such as to include a thirtieth or fortieth portion of their reserves in the form of silver, that will be enough to enhance the value of silver and bring down the price of gold and lead to a general rise of world prices.⁵

⁵ This will be so even if silver is taken into the currency reserves at its present market value. The Right Hon'ble L. S. Amery, M.P., pointed out in a discussion on silver at a meeting of the Royal Institute of International Affairs (London) (Dec. 1st, 1931) that "the ideal system would be one which restored silver to a full parallel position with gold as a basis of currency by a fixed ratio agreed to by the leading governments of the world, and while I believe that is perfectly feasible, I doubt if it is possible immediately, because it requires a good many governments to agree and it requires the agreement of a ratio which might take a long

The proper proportion of the Reserve may well correspond to the ratio which may be fixed between the values of the two metals—for example if the ratio of gold to silver be fixed at 1 : 32, the Reserves may be fixed at 32/33 gold and 1/33 silver.

(iii) Further Demand for Subsidiary Coinage.

Even if bimetallism or bimetallic reserves be not adopted, if all or the most important countries patronise silver by using it for their subsidiary coinage, this alone will have considerable effect on the price of silver. Though subsidiary coins of lower value may continue to be in nickel and copper, the higher grades of subsidiary coins may be issued in silver. If they are already in silver, the silver content may be increased.

But, except for raising the price of silver, this has no other function. Why Governments which are not interested in silver production should take upon themselves the financial burden (however light) which such a step would entail is a pertinent question to be asked in this connection. For subsidiary coinage silver is no more than a luxury or in the words of the late Governor Benjamin Strong of the Federal Reserve Bank of New York, 'a convenience demand,' and there is no reason why the tax-payer should be penalised in order to help the producers of silver. Further it will be a hard job converting countries which with a view to economy have substituted notes for silver or debased their

time to bring about. What is immediately possible is to introduce silver into the currency reserves of a few of the leading countries in the world. Doing that would not only automatically release a certain amount of gold, but it would also automatically by creating a considerable demand for silver, increase the price of silver, and, therefore, improve trade with silver-using countries. That reserve could be held, for the time being, till the ratio were agreed upon, at market price. The mere fact that those reserves were held so that the excess above the required reserves would be sold off and deficiencies made up by buying would tend to give silver not only a higher, but also a steady price. That would, I think immediately, and substantially, affect the world position." (*International Affairs*, January 1932, pp. 66-67.)

coinage to return to their former practice. It will not cure the world depression, and as already noticed, so far as India is concerned, she has no great interest in merely raising the price of silver and even if it has, the import duty is the most excellent device in her special conditions.

(iv) As a Means for Discharging International Indebtedness.

One point, however, must be recognised. We cannot hope very much from the rehabilitation of silver in one or more of the ways suggested above. Silver after all can only be a small part of the monetary currency of the world. The total annual output is in the neighbourhood of 250m. ounces, which at the ratio of $1/32$ to gold will be only 160m. Dollars in value. Of this quite 75 per cent may be needed for the industrial arts and absorption by India for ornaments, etc. So that the remaining 25 per cent alone will be available for monetary purposes. But out of the stock at present a portion, say 2000m. ounces may be expected to come into Currency Reserves. This, valued at 1280m. Dollars is only a very small addition, though something valuable in itself, to the total monetary gold stock of the world, viz., 12,000m. Dollars, and may not significantly contribute to solving the monetary difficulties of the world.

No remedy by way of bimetallism, bimetallic reserves or greater utilisation for subsidiary coinage will be of any use unless the United States of America changes its present policy of accumulating gold, which it pursues either consciously or unconsciously. No use of merely saying that the pursuit is not deliberate and gold comes of its own accord.

The entire foreign indebtedness to United States of America which amounts to the figure of 19,000m. Dollars is payable only in gold. Of course by means of imports of goods payments may be made. But imports are greatly discouraged, if not completely shut out, by means of heavy import duties. Other countries also have been raising tariff walls. The result is that debtor countries

can only partially discharge their debts by means of goods. The balance of indebtedness has perforce to be discharged only by the export of gold and if silver also is permitted, gold and silver. In international trade United States of America has every year a favourable balance of trade. How can the debtor countries pay her except by means of gold? If United States of America invests in foreign countries, that will prevent the inflow of gold. The present total stock of monetary gold in the world is about 550m. ounces worth 11,400m. Dollars. The total silver stock available for monetary purposes is perhaps not more than 6000m. ounces.

If the United States of America does not take to a policy of investing the whole or greater portion of her credit balances in other countries the result will be that gold and silver will both be drawn to her, and there may not be enough to cover her total credits and both gold and silver will appreciate enormously. Such a situation will inevitably drive the other countries to 'managed currencies.' If the United States of America is to save the world and herself from the present trade depression, she has to permit the payment of her debts not only in gold but in silver also. This, however, is not enough. She has further to adopt a policy of investing or lending her surplus in foreign countries. Of course this will add to the burden of their indebtedness to her. But a continuous policy of investment in foreign countries is the inevitable duty of such a creditor country as the United States of America.⁶

⁶ Compare the statement of Mr. Graeme K. Howard on the Effect of Low Silver given before the House of Representatives Committee on Coinage, Weights and Measures: "If we were to substitute silver to-day as a currency metal, unless we changed certain basic conditions and by basic conditions I mean reparations, war debts, competent treatment of tremendous private debts abroad, tariffs, export bounties, and the like—unless we change those basic conditions, then all that would happen would be that France and the United States would have all of the silver; and if silver instead of gold had been the medium during the past five or six years, that would have been the natural result. Silver or gold is merely a medium which automatically follows the course of trade." (H. Res. 72. *The Effect of Low Silver*, p. 185.)

Now What Must be the Ratio.

Whatever may be the proposals that are considered feasible, there is an underlying assumption in all cases that the ratio which would be fixed between gold and silver would be one which would assign a higher gold value to silver than the market does at the present time. That is a very important condition. Supposing that condition is eliminated, and that silver is re-monetised at its existing market price, which in terms of gold is not very much above 1s. an ounce, there is no very large stock of silver available to be bought by the central banks of the world.

The Austrian Economist Dr. Joseph Hans would suggest the fixing of a price of 15d. gold per ounce of silver; Mr. Francis Brownell, Chairman of the American Smelting and Refining Co., would desire the price to be fixed at 50 cents per ounce; while the general body of opinion in England seems to favour a ratio of 1:20 which would mean a price of about 46½d. (gold) or 94½ cents per ounce. That the present market prices of gold and silver ought not to be considered the basis is accepted by all those in any manner concerned with the question. Gold commands its present value not because of its own intrinsic worth, but because there has been during the past five or six years a universal demand for it for currency purposes. If all or some of the important countries of the world would adopt for themselves a system of 'managed currency' based not on gold or any other metal but on the general level of prices or other basis and definitely demonetise gold and divorce it from their currency systems or in some other manner economise their monetary demand for gold, in a moment gold will go the same fate as silver and its price tumble down to perhaps a third of its present market value or even lower still. At least in the case of silver there has been a universal and steady demand in the industrial arts but with regard to gold even when its price is reduced to a third of what it is now, it will be perhaps too costly for the generality of people to resort to it in preference to silver. There may indeed be a greater demand for gold than now

for jewellery, etc., but not so much as to absorb any more than a fraction of the quantity released from the monetary reserves. It is the coinage and currency requirements of governments and the universal preference for gold combined with the demonetisation and debasement of their silver tokens by various countries together with the silver sales policy of the Government of India on a large scale that have cumulatively determined the market values *absolutely and relatively* to each other of gold and silver so far. If as is probable gold is not in any event to be demonetised then if silver also is to serve as a basis for the world's currencies there will be a larger supply of money than the world will need, if the ratio is to be fixed at 1:20; and new remedies will have to be sought for checking the actual and possible conditions of inflation resulting therefrom. In my view having regard to all the circumstances including also the ratios of the percentage of production of the two metals by weight as well as of their present and prospective values and the possibilities and conditions of future production of both it will not be unreasonable to adopt a ratio of 1:32.

If owing to unforeseen circumstances there is to be a permanent increased demand or supply of either gold or silver there may be a provision in the international agreement to be arrived at hereupon, for revising the price of silver or its ratio to gold at such intervals as may be agreed upon. There may well be a Committee appointed to examine the question, say, once in three or five years.

An International Conference on Silver.

Such a Conference will greatly facilitate the determination of a proper policy with regard to silver. Indeed, as Sir Reginald McKenna has stated⁷ only through international action, a reason-

⁷ Letter dated March 11, 1931, addressed to the Chairman, House of Representatives, Committee on Coinage, Weights and Measures. (*Vide* H. Res. 72. *Effect of Low Silver*, p. 235.)

able stability can be given to the value of silver. There is a certain advantage in knowing the view points of all nations interested in the question, even if it should be the case that many of the countries concerned do not agree to any definite policy. If it is to be found necessary to carry out any policy that may be devised then a permanent international body—'an international silver league,' may have to be established for continuously advising the successful carrying out of such policy.

Perhaps the world is not at present ripe enough for building up currency systems based on the credits of Governments or price levels—that is to say, for 'managed currencies.' For at least some more decades the world's currencies will have to function on the strength of some reference to metallic reserves, as public opinion regards such reserves as more or less knave-proof.

The question is, having regard to the existing conditions of the world what is the most feasible—whether we must build our currencies on the basis of gold alone or gold and silver. There are many who advocate the reduction of the Central gold reserve requirements of all countries to a ratio of 20 per cent or less which they think will adequately remedy the present situation; and they object to silver on the ground that it will unnecessarily complicate the monetary system and may impede the advance towards the goal of 'managed currencies' to which the reduction of the present gold reserve requirements will be a forward step. The reduction of the gold reserve will not however unless there is a change of policy in the United States of America, remedy the situation. In the United States of America the gold holdings are far in excess of the minimum reserve requirements. The reason for this accumulation of gold in the United States of America is, as is well-known, that there are no means for the debtor countries of discharging the net balance of their debts (payable in gold) to her except by means of gold exports. Her tariff wall hinders such payments being made by means of goods. The United States of America's balance of payments every year leaves a high surplus in

her favour which as conditions are at present can be discharged only by the export of gold. So long as the United States of America does not adopt a policy of continuous lending to other countries she will eventually absorb all the monetary gold now existing in the outside world.

If, however, she permits the payments of her debts not entirely in gold but in silver also at least in part the seriousness of the situation will be mitigated. Thus the future of the world depends on the United States of America and the policy or policies she will pursue in future. Even if no other country co-operates with her, in view of her overstrong economic and financial position the adoption by her even singly of any policy in respect of silver must have a tremendous effect on its position, as she is the biggest creditor nation and holds the largest stock of monetary gold at present.⁸

⁸ Mr. Andrew L. Somers of New York introduced in the House of Representatives on May 3, 1932, the following joint resolution to authorise the payment of foreign debts in silver under certain limitations and it was referred to the Committee on Ways and Means and ordered to be printed: "*Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That when offered by any foreign government indebted to the United States, the President is authorized to accept in payment of the whole or any part of any amounts of principal or interest due to the United States, prior to July 1, 1936, silver at the rate of one and one-half fine ounces for each dollar which such government is obligated to pay to the United States; but no such payment shall be accepted unless such government gives assurance, satisfactory to the President, that it will not melt or debase its own coins to make such payment in silver: Provided That if any such government shall make provision, satisfactory to the President, for restoring, prior to July 1, 1936, all of its silver coinage to a fineness of at least nine-tenths silver, or, if such government does not now mint silver coins, for establishing the use of silver for coinage purposes, then the President is authorized to accept silver from such government at the rate of one fine ounce of silver for each dollar of its indebtedness paid in accordance with the terms of this Act. The silver so received shall be coined into dollar of standard weight and fineness and deposited in the Treasury of the United States and silver certificates shall be issued, in the manner now provided by law, against the dollars coined.*"

With regard to the proposals that may be suggested or agreed upon, one thing, however, must be definitely stated here for the information of those that are now handling or will in future be called upon to handle the problem in its international aspect. No scheme will have the confidence of the East unless it is approved and adopted by all countries affected by the present position of silver, especially the United States of America. If silver is to be introduced either as money or as part of the monetary reserves or as the chief metal for subsidiary coinage, then if it is to be introduced *only* in some of the Eastern countries as some Western economists and statesmen are proposing, then it will shake the very foundation of confidence in the metal as such proposals will only be considered as a device to dump the East with their unwanted white metal. The mind of the Oriental is very subtle and he will scent suspicion even where there is none. Unless the United States of America by her own example adopts any scheme in the first instance there is little chance for the success of any international proposal however well merited.⁹

⁹ This aspect of the matter is to some extent recognised by American authorities themselves. Thus James P. Warburg, President of the International Acceptance Bank, in his statement before the House of Representatives, Committee on Coinage, Weights and Measures said: "In addition to undebasing coinage which has been debased, it may be necessary to dignify silver in some way in the gold countries, so as to restore confidence in silver in the East. It may be necessary to include in the gold bullion reserve in the gold countries some silver, just to make the East believe in silver again." (H. Res. 72. Effect of Low Silver, p. 32.)

REVIEWS

THE INDIAN TARIFF PROBLEM, by Hirandra Lal Dey, M.A., Ph.D.
(George Allen and Unwin Ltd., London). Pp. 304. Price Rs. 16 net.

This is a thoughtful and stimulating book—a good corrective to the extremely crude protectionist doctrine generally found in ordinary text-books on the so-called “Indian Economics.” The author is seen at his best in Chapters I and IX, where he gives the general results of his penetrating analysis. The remaining chapters are at best a general summary of the information contained in the reports of the Indian Tariff Board and are not even up-to-date as regards the relevant statistics. But the first and the last chapters deserve to be read seriously by every thoughtful publicist. The craze for indirect taxes in India is so strong that few people pause to consider the cumulative economic effects on the country as a whole. The author rightly points out that “whereas the preponderating influence exercised by direct taxes on the fiscal system of the United Kingdom makes the distribution of the burden of taxation in that country conform to the equitable principle of progression, the overwhelming pressure of indirect taxes on the fiscal system of India, on the contrary, makes for a distribution of the burden of taxation in the latter country, which can be reasonably assumed to be heavily regressive, and, therefore, unjust and inequitable in character” (pp. 21—). The nature, proportion and effects of the consumption taxes in India make the position of the masses even worse, for unlike the case in the United Kingdom, “a considerable part of the revenue derived from indirect taxation in India is raised from the taxation of necessities of life and means of production” (p. 22). Protective duties further aggravate the situation by “transferring incomes largely from the general mass of consumers, who consist in every country, and specially in India, largely of the poorer members of the society, to the favoured groups of entrepreneurs, investors, and wage-earners who are connected with protected industries.” Thus the protective duties on the necessities of life and means of production are “both negatively as well as positively responsible for widening the inequalities among the different income groups” (p. 26), in Indian society.

Apart from this inequity, the author objects to the existing protective duties on the ground that they “weaken national character at many more points than strengthen it” (p. 36) and “severely handicap the unsheltered industries in the domestic market and the export industries in the foreign markets, primarily by raising their cost of production” (p. 286). He finds

fault with the Tariff Board for not having realised sufficiently "the *cumulative* effect of protective import duties in their reaction on the agricultural and export industries of the country," particularly "in the recent years of falling prices, shrinking exports and increasing weight of interests and debts" (p. 286) and *pleads* that "the principle of *discrimination* in protection, so insistently urged by the Indian Fiscal Commission, should not merely remain as a largely empty phrase as hitherto, but be accepted as an active principle in the selection of industries and also in fixing the rate and limiting the duration of the duty to be granted" (p. 286). Altogether, the book is a welcome addition to the literature on Indian economic problems, and while many will disagree with the author in his main thesis, few will deny him the credit of independent thinking and freshness of outlook.

- H. L. CHABLANI.

INDIA AND THE LEAGUE OF NATIONS, by Sir J. C. Coyajee. Waltair, 1932. Pp 239. Price Rs. 3 or 5 s.

Sir J. C. Coyajee, who was himself a member of two of the delegations sent by the British Government to the League of Nations has in *India and the League of Nations* reviewed the work done by the League and the part played by India in the League.

Sir J. C. Coyajee has not dealt with the constitution and organisation of the League of Nations but has carefully examined the nature of the League of Nations and also the position of India on the League. His views on the nature of the League and on the conception of national sovereignty are sound. Sir J. C. Coyajee is a great believer in international co-operation and in the future of the League of Nations. He recognises the anomaly of India's position but ignores the difficulties that arise therefrom. He is quite content with the method of appointment of Indian delegates and their position and status and does not make any reference to the strong resentment felt by educated Indians on this question. The position of the Indian States in this connection presents special difficulties which are stated by Sir J. C. Coyajee. They can be solved only with the coming of a real federation.

Sir J. C. Coyajee believes in India's association with the League and emphasises the advantages she can obtain from her membership of the League in spite of the financial burden which it imposes on her. He discusses the methods of increasing India's influence in the League but fails to mention the one essential factor—the attainment of self-government within the country. India cannot, in the nature of things, pull her full weight outside—in international or imperial politics—till she becomes

mistress of her own destinies. All the same the book is well written and surveys accurately the work done by the League and India on it. All those who wish to understand the part India has played in the work of the League ought to read it.

GURMUKH N. SINGH.

COST OF MILK PRODUCTION AT LYALLPUR, PUNJAB, by D. P. Johnston, Principal, Agricultural College, Lyallpur, and S. Kartab Singh, Assistant Professor, Lyallpur Agricultural College: Rural Section Publication No. 25 of the Board of Economic Inquiry, Punjab, 1932. Price four annas.

This is a short note containing the results of an investigation regarding the cost of production of milk, deserving a place in every public library of India. For, the inquiry is almost perfect regarding methods and exhaustiveness and accuracy, and the problem of healthy milk supply in towns and more particularly in villages in India is today of much greater importance than that of self-determination or full responsible government. The Indian Census Report bears full testimony to the horrible dimensions of infant mortality in this country, and inadequate and unhealthy milk is probably among the main causes for the recent increase in death-rate among babies. Principal Johnston must be congratulated more on his selection of the herd in the College itself than on the inquiry; for, the task of ascertaining the cost of milk production among private producers is indeed very complicated and uncertain to grapple with. Cost of supervision has not been included in assessing the cost of production, as the net profit is generally considered as the return for supervision. This is quite correct. But in the costs are included 8 per cent interest on the capital outlay of Rs. 4,000 on buildings and Rs. 3,200 on the cows, and depreciation has been allowed at 12 per cent on the cows and at 2½ per cent on the buildings.

The average yield per cow for the year under report was 4176·7 lbs. and the total cost was Rs. 5,711·13·6. After deducting sundry credits, this amount came down to Rs. 5,409·2·10, and thus the cost of production of milk per lb. worked at 0·986 anna per pound. In popular language this works at annas two per standard seer of 120 tolas, or at eight seers per rupee. Today there are scores of cities in India where pure milk cannot be had even at two-and-a-half seers per rupee, and Principal Johnston's figures offer rich food for thought to all interested in the health of children in India. More especially so because, as the Principal himself plainly says, costs could not be higher ordinarily on private farms compared to Government farms. On many items, costs incurred or allowed are

certainly reducible in the case of private production. For instance, the allowance for Municipal water for drinking (used by the cows) is Rs. 40-12-4, and the cost of coal used is Rs. 41-9-7. The kine were entirely stall-fed, there having been no suitable pasture ground nearby. In addition all labour utilised has been charged.

The thought that comes uppermost in the mind of the reader is—if on the Lyallpur Agricultural College Farm milk could be produced at eight seers per rupee, could it be really impossible to guarantee the supply of pure and healthy milk in the numerous cities in India (and in the villages) at least at six seers per rupee? Government, our Municipalities and our public leaders have before them an extremely important responsibility in this respect. The indigenous *gouth* is head over ears in debt from time immemorial, he hardly makes the two ends meet in matters of food, drink and clothing and shelter, and yet milk of the sort that sells in our disorganised cities is so costly! An immediate step that should be taken is that similar inquiries should be started on all Government Veterinary Departmental Farms.

The Punjab Board of Economic Inquiry deserves the grateful thanks of the entire country for putting before the public such scientifically conducted inquiries in such precise and clear manner.

—S. KESAVA IYENGAR.

THE SCIENCE OF POLITICAL ECONOMY, by Henry George (The Henry George Foundation of Great Britain -1932.) Pp. 433. Price. 2s. 6d.

Poverty and inequality, the twin social evils, have always exercised the minds of humanitarians and reformers. During the recent period of depression and crisis the interest aroused by these evils has been intensified. It is not, therefore, surprising to find that an association established for propagating the views of Henry George on these and allied subjects should have thought of issuing an attractive and cheap edition of his treatise on Political Economy. Nobody can refrain from offering a tribute to the great author for his sincere desire for removing a great social evil, nor must we ignore the fact that Henry George was one of the first writers to draw pointed attention to the unsocial results of a régime of private property in land in a rapidly advancing community. His broad social sympathies and his keenness for land reform will always keep the memory of Henry George fresh in the minds of civilised men.

Even in his lifetime Henry George, the self-made and self-taught publicist of San Francisco, found cause to be dissatisfied with the treatment meted out to his book by economists in America and other countries. Yet

when George wrote, the unsound theories of population, production and distribution propounded by the Classical School were not altogether superseded by the marginal concepts of the Austrian School. Henry George, indeed, rendered very good service in completing the process of scouting the Wage Fund theory and in proclaiming the truth that wages come out of the produce of labour itself. He was not, however, free from the besetting obsession of his generation, *viz.*, that in the field of distribution there was some essential antagonism between certain sharers. That interest and wages both tend to a minimum and rent goes on constantly increasing owing to the establishment of private property in land was the principal thesis of George. From these premises he logically concluded that the surest remedy for the extinction of the economic evils of modern communities was to tax rent out of existence.

Admitting that the persistence of unearned increments is relatively more prominent in land than in other forms of wealth it must be said that Henry George's scheme of the laws of distribution is utterly faulty. In the first place, it is not correct to say that wages and interest, which latter apparently includes profits, tend to decrease nor that rent constantly rises. The limited experience of his time and place suggested to him a few critical thoughts which did service in correcting the one-sided English doctrines. But in his turn Henry George himself failed even more miserably in deducing universal laws of distribution from his own observation. The whole of the modern concepts of marginal productivity and marginal value and their application to the earnings of all the sharers in the national dividend were beyond the comprehension of George. In fact, failing to understand the significance of the work of Bohm-Bawerk and other writers of the Austrian school, Henry George has fallen a prey to the temptation of ridiculing them.

The whole scheme of the book of Henry George is based on an ignorance of the premises, method and viewpoint of the science of Economics, and therefore its usefulness as an introduction to the serious study of the subject is very limited. But, as observed above, its spirit of social reform, its criticism of certain old-fashioned economic doctrines, *e.g.*, the law of diminishing returns and the Malthusian law, and its exquisite style entitle the book to an honourable place in the critical literature of the science of Economics. We guess that the purpose of the publishers in bringing out the book in its present form is to press into the arena of economic policy his suggestion that crisis, poverty and inequality can be removed only by the abolition of private property in land. If this is so we fear that the best thought of both the socialists and the economists has travelled much too far to take serious notice of such a narrow, undeveloped and incorrect analysis of a continuing and almost universal social problem.

—D. G. KARVE.

INDIAN INDUSTRY AND ITS PROBLEMS. Vol. I. FACTORS IN INDUSTRIAL DEVELOPMENT, by H. R. Soni. Longmans. 1932. Pp. 439. Price Rs. 10.

Indian Industry and Its Problems is the title of a work by Dr. H. R. Soni of the Benares Hindu University which is coming out in three volumes. The first volume is out and bears the title -- *Factors in Industrial Development*. It is divided into nine chapters. Chapter I deals with Raw Materials, Chapters II and III with Sources of Heat and Power, Chapters IV and V with Finance and Management, Chapters VI and VII with Labour, and Chapters VIII and IX with State Action. These chapters are preceded by a Preface and a Preliminary Survey.

The Preface explains the object of the work and replies to some of the criticisms which the author thinks might be levelled at the work. These need not be troubled about, but the object of the work is too important not to be noticed. The author says that in spite of the fact of the industrial backwardness of India having been realized on all hands and in spite of so many Commissions having sat to devise ways and means for the regeneration of industry in the country, industry here has remained, for all intents and purposes, where it ever was. The reason for this, he contends, has been that the schemes that the various Commissions formulated were haphazard. They were "indifferently constructed . . . under different conditions and at different times" and could not, therefore, "be fitted together to form a complete machine-unit." Moreover, some of their "vital parts" were missing and could not be provided. He says that his work constitutes an attempt "to reshape the defective parts, to provide the missing nuts and wheels, and to fit the lot together into a complete, workable machine-unit" and that "if a solution of the problem of industrial development is ever sought in India, a beginning will have to be made on the lines identical to those suggested by me." So long as we have not gone through the other volumes still to be out and become fully conversant with the complete scheme we find it difficult to express a definite opinion on its merits, but from the idea he has given us of it in the present volume we can confidently say that the scheme promises well to put India on the road to industrial development should it be put into action. But here lies the rub. It is an all-comprehensive scheme. It aims at bombarding the citadel from all sides and at the same time—which means tackling the problem of basic and non-basic industries, of power supply, labour, finance, fiscal policy, transport and of the different forms of direct and indirect state aid to industry satisfactorily and more or less simultaneously. This would require huge funds, a proper preparation of the ground by a thorough examination of the conditions governing the establishment of different industries, and a Government completely willing to do all that lies in its power in this regard. These conditions do not appear to us to be satisfied in

India nor likely to be satisfied in the near future. But we absolutely agree with the author that a satisfaction of these is a *sine quo non* of the full industrial resuscitation of our country.

The Preliminary Survey is taken up with a discussion of the why and wherefore of the decay of Indian industries, the slow growth of the factory industry in the country and the objective of Indian industrialism. All these topics are very well discussed. We would comment only on two points, since in regard to these we have a little difference of opinion with the author. The first has reference to the past--the causes of the decline of Indian industries. In dealing with these, the author takes the leaders of Indian opinion to task for blaming the British rule for that decline. The decline of the Indian handicrafts was, he says, inevitable: it could not have been checked, for, the conditions obtaining internally and externally were such as could not have withheld the catastrophe happening. Then, he tells us, that it should be kept in mind that the British could not have been expected to sacrifice the interests of their own home industries for the sake of Indian industries; they were in India primarily to push forward their own industrial development which had come about with the Industrial Revolution in England. We are at one with him in all this. But we would point out that the British did not always unequivocally confess that the purpose of their rule in India was the furtherance of the industrial revolution of their motherland. If they had done that none would have been justified in quarrelling with their policy. Then we would say that the only course open to a conquered nation that saw its industries decaying and itself reduced to the position practically of a hewer of wood and a drawer of water was to point out to the rulers the harm that was being done to it and appeal to them to either stop the harm altogether or reduce it to a minimum. Lastly, we would note that the Indians have gone a long distance from the position they occupied at about the end of the nineteenth century and the beginning of the twentieth century. There is now among our economists particularly and the politicians generally a much better realization of the causes that brought about the decadence of the country's industries. They do not unlike the politician-economists of those days lay exclusive emphasis on the British rule or its industrial policy as being responsible for that decline, but make full allowance for the other circumstances also that led in the same direction.

The second point relates to the industrialised India of the future. The author thinks that even when that becomes a reality, the poverty problem of the country would not be solved. The rise of industries would, no doubt, take away a certain proportion of the population from the rural areas to the industrial centres and thus relieve the pressure on the soil. But the betterment of the condition of the people that will result therefrom will not be permanent, for population will outstrip, sooner or later, sooner rather

than later in India, the means of subsistence. So poverty will stalk again through the land. This is Malthusianism pure and simple. It is a pity, indeed, that its nightmare ever haunts the author and he cannot shake it off. We cannot understand why the betterment of the condition of the Indian masses which will come about and will lead to a higher standard of living among them will not bring about more or less permanent results especially when the higher standard follows in the footsteps of proper housing, sanitation, education, etc., being provided for them ; and all these better conditions the author earnestly wishes to see provided for our masses. We think that when this happens, the Indian masses will resist all temptation to lower their standard by increasing their numbers.

As regards the body proper of the volume, the nine chapters. These, as already stated, concern themselves with the factors in industrial development, *viz.*, raw materials, sources of power, finance and management, labour and state action. We have nothing but admiration for what the author has written in them. He has explained the present position with regard to every one of the factors, given reasons for the position being what it is and suggested remedies to improve or reform it, in every way. Also he has provided a historical background in some cases especially in the chapters on state action and all this has been done with a mastery of detail and technique that is highly praiseworthy. He has read widely, pondered deeply, grasped the subjects thoroughly and expressed himself lucidly, courageously, and forcibly. No doubt at places his words smack of a lack of polish or, as he himself says, are 'unvarnished.' But we do not think that that is a drawback. We are, on the contrary, of the opinion that it is an advantage. It was time that some one came forward and put things bluntly and trenchantly where they required to be so put—that is, call "a spade a spade" so that those of the sons of the country who have injured India industrially by their selfish and dishonest methods should realize the harm they have done and desist from their evil practices. Also, his 'unvarnished' language comes to relieve the tedium which one going through a lengthy book, like the present, is likely to feel sometimes, however well the book might have been written, as the volume in hand is. We would not quote here examples of the author's way of saying things bluntly, almost rudely, but we would refer those who are curious in regard to this matter to pages 19, 32, 291, 294, 315, 328, 348, 354, 357 and 420.

We have gone through the volume with the greatest pleasure. We regard it as a book which should be in the hands of Government officials, politicians, industrialists and students. We think all will derive a great benefit from its perusal. It is indispensable for all those who wish to see India advance industrially.

G. D. K.

BANKS AND THE MONEY MARKET, by Dr. B. Ranchandra Rau, Calcutta. 1933. Pp. 257, Price Rs. 2.

Dr. B. Ranchandra Rau has already made his mark as the author of several works on Indian Banking. His latest book *Banks and the Money Market* is a useful reprint of the four much appreciated lectures which Dr. Rau delivered to the Institute of Bankers in the cold weather of 1930-31.

In the First Lecture the Professor gives a lucid analysis of the salient functions and features of the different specialised credit agencies which are the useful constituents of a well-organised money market. Considering the monetary position in India, Dr. Rau does well to point out the defects of what he calls 'national as well as local money markets' and then to indicate the possible remedies leaving it for the different credit agencies themselves to determine by what road and at what speed they would progress. One may not quite agree with Dr. Rau in regard to the appropriateness of the terminology, *local* and *national* money markets employed to mean indigenous moneylenders and bankers, and all the constituents of Indian banking respectively, but that is a matter of opinion and after all a small point.

The Second Lecture explains money and describes the present currency system of India, its defects and the methods at present available for the expansion and contraction of currency. In conclusion, the fact that currency reforms depend upon an improved credit system is rightly emphasised.

In his Third Lecture, Dr. Rau deals with the money markets in general, the problems of the bill market, investment and remittance facilities and the directions in which improvements are feasible.

The Fourth Lecture on "The Ideal Monetary and Banking System," contains many ideas and suggestions which are both refreshing and stimulating and which deserve to be seriously considered.

The eight appendices at the end are entitled: Remonetisation of Silver and the Stabilisation of Silver, India, the Gold Standard and the Crisis, Some Salient Features of the Foreign Banking Systems and their Lessons for India, A Banker's Register, Extension of the Co-operative Movement, Future Outlook of the Indian Joint-Stock Banks, Future of our Foreign Exchange Banks and Future of the Imperial Bank of India. The appendices greatly add to the value of Dr. Rau's work which must be read by all those who are interested in Indian monetary problems.

—L. C. JAIN.

- (i) OTTAWA TRADE AGREEMENT BETWEEN INDIA AND GREAT BRITAIN, by C. N. Vakil, University Professor of Economics, Bombay, and M. C. Munshi. Pp. 39. Price 10 as.
 - (ii) IMPERIAL PREFERENCE FOR INDIA (THE OTTAWA AGREEMENT EXAMINED), by D. R. Gadgil, M.A., M.Litt. (Cantab.) Pp. 66. Price Re. 1.
- and
- (iii) THE OTTAWA AGREEMENT (A STUDY IN IMPERIAL PREFERENCE), by D. Ghosh, M. A., (Cantab.), Reader in Economics, University of Bombay. Pp. 73+iii. Price Res. 1-8-0.

All these three pamphlets deal practically with the same matter and bring out the same conclusion. Living in or near a big commercial city like Bombay, the writers of these pamphlets had invaluable opportunities of getting more detailed information about the various trades affected by the agreement than *is to be found* in the ordinary official publications on the subject; but neither of them seems to have made any effort in this direction. They were obviously written in a hurry to catch the market or to influence public opinion in the country. Of the three, Professor Vakil's is the most suited for the purpose in view; Professor Gadgil's is the most detailed study of the available data bearing on the Ottawa Agreement; while Professor Ghosh's pamphlet is the most useful to the undergraduate student who wishes to have a clear statement of the general considerations involved in the problem. All the three condemn the Ottawa Agreement as prejudicial to India's interests, though with varying degrees of emphasis. Neither has taken into account the fact that the exchange fluctuations with non-empire countries are one of the major factors in the problem, which would upset all estimates of gain or loss from any nicely calculated percentage of preference to Empire countries. Subsequent events have shown that the Ottawa Agreement has benefited neither Britain nor India, though it has benefited other British Dominions. What is to take its place under the situation created by the failure of the World Economic Conference? The gold exports from India must stop sooner or later; and India must export more than she imports if she is to maintain her external credit. With the present slump in the *world* prices of agricultural produce, India cannot compete in an unsheltered market; therein lies the case for the revision of the Ottawa Agreement which Mr. Ghosh suggests.

For a proper appreciation of the issues involved, the three pamphlets should be read together with the discussion at the last session of the Indian Economic Conference. The general public ought to be grateful to these writers for bringing out such timely publications on a current topic of general interest.

—H. L. CHABLANI,

ELEMENTARY ECONOMICS FOR INDIAN READERS, Vol. I, by Rani Kumar Luthera, M. A. (Hist. and Econ.), Professor, S. D. College, Lahore, with a Foreword by Prof. Brij Narain; revised by Prof. Harnam Singh, M.A., B.Sc., and published by R. S. Jaura, B.A., B.T. The Students' Popular Depot, Lahore. Pp. 314.

Prof. R. K. Luthera's chief object in this small book is to present the general principles of economics in a form at once simple, clear and concise. His success in this regard is admirable. He has profusely illustrated his conclusions with reference to conditions existing in this country with a view to make the book easily comprehensible to an average Indian student. The book contains enough information for the students of the Intermediate Classes.

The volume consists of three parts, "Introductory," "Consumption" and "Production." Each has its own merits and demerits. On the whole the book is fairly satisfactory. In our opinion, a few minor alterations here and there would make certain statements more accurate and valuable. For instance, on page 84, the expression, 'The demand for a commodity varies with its price' would certainly be improved, if it were changed into 'the demand for a commodity varies inversely as its price.' Similarly on page 86 the distinction between desire and demand (effective desire) as brought out by the author on page 79, would be made quite clear, if the word 'or' were replaced by the word 'and' in the expression, 'At the beginning of the season oranges will be scarce and the prices high, and only those boys who have plenty of pocket money or have a very strong liking for oranges will buy any at all.'

There are certain statements which are open to challenge, for example, a broken umbrella is not wealth, because it possesses no utility and no exchange value; total utility is 'the sum total of the *decreasing utilities* of all the increments from the first to the last' (italics are ours); and 'consumption of anything simply means the destruction of its utility.' It is also hard to see how the number of the oranges demanded by the schoolboy drops down from 4 to 2 with the fall in the price from 1a. to ½a., as given on page 85. It may be a misprint, but similar misprints occur on pages 86 and 87 in the case of A's demand.

The book contains a few curves and diagrams which undoubtedly add to its value, but they also require a little modification.

The author seems to have taken great pains in bringing out such a book on the principles of economics for the beginners. Let us hope that the students of the Intermediate class will read it and derive benefit out of it.

SHANKAR LAL AGRAWALA.

THE CAMBRIDGE HISTORY OF INDIA, Volume VI, The Indian Empire, 1858—1918. Edited by Professor Dodwell, M.A., Cambridge University Press, 1932. Pp. 660. Price 30 s. net.

The sixth volume of the *Cambridge History of India* consists altogether of thirty-three chapters out of which as many as eight are devoted to the tracing of the growth of district administration in the several provinces and twenty-five chapters are written by retired Anglo-Indian officials—Sir Verney Lovett alone contributing as many as ten chapters. The Editor, who is the Professor of the History and Culture of the British Dominions in Asia in the University of London, has contributed three chapters in addition to the brief but revealing introduction to the volume.

Professor Dodwell rightly emphasises the necessity of a clear knowledge of the historical background at the present moment, without some knowledge of which "political decisions become matters of mere sentiment and chance"; but, he is afraid, that "the more accurate and sober the statement, the less likely it is to win general approval." The volume he has edited does maintain a matter-of-fact tone and presents a multiplicity of events in a proper historical setting but in a spirit thoroughly imbued with Anglo-Indian imperialism. Moreover, as pointed out by Mr. J. Coatsman, the ex-Director of Public Information with the Government of India, in the April-June issue of the *Political Quarterly*, London, the book does not give us "what we ought to have had, namely, a history of India during those crowded and fateful years." The book is really a record of the achievements of British rule in India written very largely by those who have themselves taken their full share in Indian administration.

In the introduction, Professor Dodwell begins by vindicating the Government of the Company of the charge ("without any foundation") that it was "obscurantist or reactionary." He writes: "... the development of good district government was by no means the sole achievement... *Sati* and *thagi* were suppressed, and female infanticide greatly lessened, while the introduction of the railway and the telegraph, the extension of irrigation, the conservation of forests, the spread of missionary activity and the growth of Western education brought India into contact of a new and fruitful kind with the external world." But what was the reward by the ungrateful people of the country! "India's first answer," writes Professor Dodwell, "to these beneficent changes was the Mutiny" which was essentially a Brahman revolt according to the Professor of Imperial History and Culture in London. This view of Professor Dodwell, however, finds no support from Dr. Rice Holmes, M.A. Litt. D., the writer of the chapter on "The Mutiny," who has ably analysed the various causes of the unfortunate outbreak of 1857 and its reactions on the civil population. However, the Mutiny stands as a separate episode in the volume, unrelated to subsequent history. And yet who is there who does not know that the

whole of the subsequent British policy was coloured by the distrust of the Indian engendered by the Mutiny. I have elsewhere discussed the effects of the Mutiny on the civil and military policy of the British Government in India and those who are interested may refer to my *Landmarks in Constitutional and National Development in India, 1600—1919*.

However, to proceed with the description of the contents of the book under review, it may be pointed out, that, although there are two chapters dealing with the Finances of India and the Development of Famine Policy, the economic effects of British rule are almost altogether ignored by the various writers, and the book is therefore of very little interest to students of economic history of India.

The last part of the volume is devoted to Political Development between 1858—1918. Five out of six chapters in this section are written by retired Anglo-Indians—four of them by one individual, Sir Richard Burn, and they are full of statements that are characteristically bureaucratic in tone and spirit. Two or three may be cited here for purposes of illustration:—

“No orthodox high-caste Hindu—[who dominates the political movement]—can really desire to see democracy established in India.”

“It is to be noted that . . . the Indian politician has shown himself possessed of imitative rather than critical or constructive faculties, and has never wavered in his demand for a system of government like that enjoyed by the self-governing dominions.”

“Official opinion which was strongly opposed to the system of dyarchy has often been misrepresented as a reluctance to give up place and power. It was due to the natural pride of a body of men in charge of a complicated machine of government to the perfecting of which they had devoted the best part of their lives, and which they honestly believed to be endangered if its working were abruptly transferred to inexperienced hands.”

It is not necessary to multiply instances, as almost the whole of the volume suffers from this drawback. There are unfortunately several other serious defects, some of which have been pointed out above. However, in spite of them the book is a useful addition to the literature on Indian History because, as claimed by the editor, it does “gather together in a single volume not only a wealth of personal knowledge and experience but also the information scattered through multitude of blue-books, of statutes, of Acts of the Indian Legislatures” and puts forward “the views of policy uttered both by Governors-General and Secretaries of State and by Indian political leaders.”

—GURMUKH N. SINGH.

THE FRAMEWORK OF INTERNATIONAL SOCIETY, by S. H. Bailey, M. A., Longmans, Green & Co., London, etc. 1932. Pp. 92.

The Framework of International Society, by Mr. S. H. Bailey, is a useful addition to the "Workers' Educational Association Outlines"—a series intended for the general education and enlightenment of the workers in the English-speaking countries. In a short compass—it is only a booklet of some 88 pages—the author has succeeded in dealing clearly with the various factors responsible for the growth of an international society and in describing the work of the various agencies and organisations for international cooperation. Mr. Bailey, who is an assistant lecturer in International Relations at the London School of Economics and Political Science, has rightly laid emphasis on the factors which are responsible for the creation of international relations rather than on the constitution and organisations of official and non-official international bodies. The booklet will serve a useful introduction to the study of the new international society, which is slowly growing up in our midst.

-- GURMUKH N. SINGH.

SARD BAZARI, by Prof. Brij Narain, Mercantile Press, Lahore. To be had from Sadhu Press, Roshanpura, Delhi; and, R. S. Jaura, B.A., B.T., Kachehri Road, Lahore. Pp. 138. Price Re. 1-4.

This is a publication in Urdu. It deals with the Trade Depression that has been overshadowing the world for the last three years or so. It is divided into seven chapters which treat of the Fall of Prices, Unemployment, Principles of Money, Gold Standard, Dollar-Sterling, the Fate of the Pound and the Ottawa Agreement. The author does not say on these topics anything that has not been already said but he discusses them in so simple and interesting a manner as to make everything clear not only to those who have a knowledge of Economics but also to those who have no acquaintance with that science.

We trust the book will be read widely and appreciated fully. There is a great need in India of books on Economic topics in the vernaculars of the people. The author has supplied this need partly. We hope he will try to meet it as fully as he can by publishing more books in Urdu. He complains that the *bazaar* is *sard* for such books. We think that it will become quite *garm* in the course of time especially when more books in the line are available in the market.

The book contains a number of charts which are printed on art paper and of tables which have been collected from various sources not easily within the reach of every one.

We heartily congratulate the author on bringing out this book.

G. D. K.

THE FRAMEWORK OF AN ORDERED SOCIETY, by Sir Arthur Salter,
Cambridge University Press, Pp. 57. Price 2s. 6d. net

This booklet contains three lectures which Sir Arthur Salter delivered at Cambridge on February 22, 23 and 24, 1933, as the first Alfred Marshall Lecturer. The first lecture is entitled, *The Need for a New System*. In it the lecturer points out the necessity for an ordered society. He explains that the controls and restrictions which are met with everywhere are "foolish and improvised" and require to be replaced by "wisely planned control" and that the task of planning and control cannot be performed by Government alone but must be carried out through unofficial institutions, arising from within the economic system, with Government encouragement and guidance. The second lecture is headed *Institutional Self-Discipline*. In it are described the lines along which the institutional self-development that Sir Arthur has in view may be promoted. Those lines are summarised on pages 37 and 38 and concern the control of money, the flow of capital, and industrial organisation. The third lecture is named, *The Role of Governments and Economic Advisory Councils*. In this are outlined the functions that Government will perform under the new dispensation, and the reforms that are necessary to enable Government to perform those functions. Those reforms are first, "a delegation of power from Parliament to the Executive"; and secondly, "the utilisation by the latter of specialised external advice, to supplement the help of its own permanent advisers." To achieve the second an appropriate organisation—a kind of National Economic Council—will be required. Sir Arthur frankly states that Economic Advisory Councils have not thus far been successful; but he believes that they can become successful if their functions are developed along the right lines. What he considers those right lines to be is set forth on pages 52—54.

The framework of an ordered society that the lecturer presents has one idea that is its guiding force. That is that he wants to seek a middle course between a communism that destroys both personal and political liberty, or a Fascism that at least seriously curtails the first; a restrictive state socialism directing everything from the centre; and an unregulated *laissez-faire* which we cannot recover if we would, and any attempt at which will cause the continuance or the recurrence of our present economic troubles, (page 56.) The middle course according to him lies in the self-governing and self-regulating economic structure that he has sketched. This has the good points of all the systems without their evil characteristics. It will "on the one hand prevent the suicidal impact of particular activities upon each other, and on the other hand will preserve the essentials of both economic and political freedom" (page 57).

—G. D. K.

INTERNATIONAL ECONOMICS, by R. F. Harrod, M.A., Published by Nisbet and Cambridge University Press. Pp. 211. Price 5s.

A series of Economic Handbooks is being issued under the general editorship of Prof. J. M. Keynes with the object of providing the general reader with a number of readable volumes wherein he may find a clarified exposition of modern economic thought. The degree to which the older economic principles and formulations are valid in the light of Post-War experience is here considered with an unprejudiced mind by the author.

There is a general tendency among many academicians to regard such principles as settled and complete. The writer rejects such conclusions and tries to re-examine and re-state the fundamental theories of economics by integrating them with the knowledge derived from the analysis of modern problems. His treatment does not preclude further modifications when new facts manifest themselves.

By international economics, the author means the study of the way in which economic transactions are affected by the existence of national frontiers. Though the title of the book is *International Economics* the author mainly deals with the complicated mechanism of Foreign Trade which he rightly considers the basic factor in all International relationships. He breaks no new ground on the fundamentals of foreign trade but in the main follows the classical writers.

The book is divided into nine chapters dealing with such vital topics as:—The Gain from the Foreign Trade, Foreign Exchange, The Balance of Trade, World Monetary Reform, and Tariffs. In his discussion of Monetary Theory, he seems to favour stabilisation of prices or at least preventing prices falling faster than is warranted by the increasing production of goods. In considering means to this end, he deals with the theoretical rather than the practical difficulties. The book is lacking in illustrative facts and the whole of the analysis is academic which is undoubtedly interesting to the expert but a little baffling to the general reader.

This well written and stimulating book is one which no serious student of economics can afford to ignore. The general get-up is admirable, the printing clean, and the moderate price brings it within the reach of all

— B. V. NARAYANASWAMY.

THE CANADA YEAR BOOK, 1932. Published by authority of the Honourable H. H. Stevens, M. P., Minister of Trade and Commerce. F. A. Acland, the King's Printer, Ottawa. Pp. xxxi + 1100. \$1.50.

The present issue of this Year Book, indispensable to persons desirous of closely following Canada's progress, differs in one essential

respect from the previous volumes. The editors have found it necessary to drop (only for the time being, it is hoped) the practice of including "special articles" that constituted, in some ways, the crowning glory of the work. Written by scholars and specialists, they dealt with resources of all kinds and their exploitation in various forms and every phase of thought and activity in the Dominion; and were remarkable both for the matter included in them and its presentation. They had the merit of being lucid, concise and interesting to the scholar and general reader alike. Great care was taken to report developments as they occurred. The editorial programme was so carefully mapped out that each successive volume broke new ground and even when the statistical matter became out of date, the old Year Books continued to have value.

It is pleasant to note that the desire to save space has not been solely responsible for discontinuing this "feature." The need to extend subject-matter, particularly that relating to wireless (or radio, as it is called in the Dominion and its neighbour to the south), judiciary and jails (the latter known as penitentiaries in Canada), education and other benevolent services and the results of the Census taken in 1931, had as much to do with it as considerations of economy, just now clamant the world over.

A note of optimism, nowhere obtrusive, prevails throughout the large, closely printed volume. The trough of depression through which Canada, in common with other countries dependent upon external markets, has been passing, seems to have intensified rather than to have shaken the unbounded faith this young and vigorous nation reposes in its destiny.

The pages bear witness to the grave effect that the low purchasing power of Canada's customers abroad and the fall in the prices of commodities has had upon production particularly in the agricultural and other primary industries. The system of co-operative marketing of agricultural products through the "wheat pools," which, not long ago, gave promise of great beneficence to the farmers, has all but broken down, even though the governments of the "prairie provinces"—Manitoba, Saskatchewan and Alberta—lent liberal aid in the effort to stave off disaster to the members of the "pools," who constituted the bulk of the population in "Canada West." Owing to the low prices ruling in the Winnipeg "wheat pit," and the consequent inability of the "pools" to keep to the financial arrangements to which they were bound by contract, members had to be released from their obligation to market their wheat only through the "pools." The boards of management, on which the three provincial governments are represented, have saved themselves by reorganizing the "pools" and instead of being mainly concerned with marketing wheat are engaged in storing wheat in "elevators" (p. 667).

The hard times through which Canadian agriculture has been passing has turned the farmers' attention inward. In taking stock of their

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position they are beginning to realize that in the past far too great emphasis has been placed upon wheat-growing, which made them largely dependent upon the external market. Signs are not wanting of a growing desire upon their part to take to a more diversified form of farming and also to abandon the slipshod method of exploitation that took all the fertility out of the soil and did little to replenish it, for which Canadians, with their knack for inventing a telling phrase to fit a new situation, have the significant name of "wheat mining."

If this introspective tendency continues to grow, as it gives every indication of doing, it may, in time, revolutionize the trend of agriculture in the wide open spaces of the west. Individual holdings may shrink in area. A more intensive form of cultivation may be put into operation. Cattle-breeding, dairying, poultry-raising, meat-packing and allied interests may attract greater attention.

The rise of industrialism in these provinces constituting Canada's wheat belt, and in British Columbia, becomes more and more noticeable year by year. The figures adduced on page 312 of the *Year Book*, summarized in the table below, are striking:

VALUE OF MANUFACTURES

<i>Province</i>	<i>1880</i>	<i>1905</i>	<i>1929</i>
Manitoba	... \$ 3,400,000	...	\$ 165,000,000
Saskatchewan	... ..	\$ 2,400,000	81,000,000
Alberta	... ..	5,000,000	108,000,000
British Columbia	... 2,900,000	...	277,000,000

"Of the nine branches of production" in Canada as a whole, agriculture alone "showed marked reduction in 1929," the last year for which figures could be included in the present *Year Book*. We read:

"Forestry, comprising woods operations and the value added by the manufacturing process in the saw milling and pulp industries, showed a gain of 4.1 per cent. Mining production, reaching a new high record, showed a gain of 13 per cent. The revenue from net sales of the central electric stations at \$ 122,883,000 was 9.4 per cent greater than in 1928, this showing being characteristic of the steady and rapid development of the power industry in Canada. The revenues of the fisheries and trapping showed a slight falling off from the high levels of the preceding year. Each of the three branches of secondary production showed a substantial increase for 1929. The value added by the manufacturing operations was \$1,997,350,000, a gain of nearly 10 per cent over 1928, which in turn was greater than in any previous year in the industrial history of Canada. Construction increased by over 21 per cent and the net value of custom and repair by nearly 21 per cent" (p. 166).

In the ups and downs through which production has passed during the post-war years, the generation and sale of current—the central electric station industry, as it is called in Canada—“has shown rapid and consistent growth uninterrupted by changes from war to peace conditions or the consequent drastic changes in price levels, throughout all the years from 1917 to 1930 covered by this record” (p. 315). During these “14 years the gross value of production by this industry has risen from \$44,500,000 to \$126,038,000, while the capital investment has grown from \$356,000,000 to \$1,138,200,000” (p. 315).

The “non-ferrous metals” group has also registered “striking progress since the war.” The gross production in 1924 almost equalled that of the peak-year, 1920, while since 1925 the expansion has been very rapid.

The increase in the last named group from 1923 to 1929, *viz.*, 90.3 per cent was the highest among manufactures. The animal products grouped the lowest increase, *viz.*, 17.2 per cent. “Among the purpose group, the greatest increases were shown by drink and tobacco (84.9 per cent), vehicles and vessels (81.3 per cent), house furnishing (74.5 per cent) and industrial equipment (79.7 per cent), while the smallest increases were shown by the small group ‘personal utilities,’ (19.3 per cent) and food (21.4 per cent)”. (p. 322).

The increased consumption of luxuries such as drink and tobacco, motor cars and house furnishings, are taken to suggest a rise in the standard of living. The same conclusion is drawn from the expansion in the physical volume of manufacturing production (50.2 per cent) from 1923 to 1929, exclusive of central electric stations. During this period the population rose only by 11.3 per cent and properly speaking the increase in domestic demands should have been round about that figure. Yet the difference between 11.3 per cent and 50.2 per cent cannot be accounted for by expansion in the exports of partly manufactured goods, for the exports increased only from \$591,820,000 in the fiscal year ending March 31, 1924, to \$690,904,000 in the fiscal year 1930, the increase representing about 3.6 per cent over the 1923 production. The remainder, roughly 35 per cent, is believed to have been “absorbed by the rise in the standard of living of the population of Canada” (pp. 321-22).

The lead that agriculture formerly held over manufactures has been definitely reversed. The pendulum seems to be swinging more and more in the other direction. To quote from the Year Book :

“The greater net value* of manufacturing production and the decrease in that of agricultural operations have combined to greatly increase the lead which the former has established over the latter in recent years.

* “Net production” is taken to signify the value left in the producer's hands after the elimination of the value of the materials consumed in the production process.

This lead was 7·5 per cent in 1927, 21 per cent in 1928, and for 1929 is no less than 93 per cent. It is scarcely to be expected that this lead will be maintained at the 1929 level. Agricultural conditions were adversely affected by the fact that the per acre yields of Canadian field crops were lower in 1929 than for any year since 1915, but manufactures did not feel the effects of adverse conditions until towards the close of the year, and then not so severely." (p. 166).

References made to the part played by the tariffs in stimulating industry are candid. When in 1858—the year after the Indian Mutiny—the Canadian legislature enacted a protective tariff,

"... English exporters of manufactured goods vehemently protested. Canada, however, claimed the right to raise her revenue in the manner which suited herself and Great Britain did not contest the point. From that day to this there has been an element of protection in Canadian tariff legislation. . . .

"The maximum percentage was reached in 1889, when the rate was 31·9 per cent. By 1896 there was a slight drop in the rate to 30·0 per cent and the declining trend continued until 1918 and 1919, when a rate of 21·5 per cent was recorded. In 1923 the rate was 24·9 per cent in 1927, 24·1 per cent and in 1930, 24·3 per cent. The average *ad valorem* rate of duty on all imports was 16·7 per cent in 1923 and 15·9 per cent in 1930. These rates are based on the gross sums collected; if the refunds and drawbacks were allowed for the net rate of customs duty would be substantially lower. (p. 307).

The stimulus given by the war to the various manufacturing industries receives adequate treatment. The "great boom" did not, however, reach its height until the summer of 1920. A decline in value occurred in 1921 and a further decline in 1922. There was a steady and notable growth in both gross and net values of products from 1925 to 1930, when the gross value of manufacturing production "dropped back to near the 1927 level." (pp. 308-9).

In respect of trade, as indeed in other matters, Canada's contact with India is slight. Canadian exports to British India, in 1931, amounted to \$6,957,050 and British India ranked fifteenth among forty leading countries to which Canada exported goods. Indian exports to Canada, in the same year, totalled \$8,426,716, India ranking sixth among the thirty-five countries from which the dominion imported goods.

Indian (termed by Canadians "East Indian" or "Hindoo") immigrants were first separately entered in 1905 by the immigration authorities. There were 45 of them in that year. In 1907 (nine months) there were 2,124, mostly men and in the following year 2,622. The number fell to 1 in 1916 and was only 80 in 1931. The explanation given on page 160 of the *Year Book* of the devices employed to bring about this reduction will sound naive to Indian ears :

" . . . as a consequence of the operation of a Regulation under section 38 of the Immigration Act of 1910, East Indian immigration has since that date been comparatively small. A resolution of the Imperial War Conference of 1918 declared that 'it is the inherent function of the Government of the several communities of the British Commonwealth that each should enjoy complete control of the composition of its own population by means of restriction on immigration from any of the other communities.' However, it was recommended that East Indians already permanently domiciled in other British countries should be allowed to bring in their wives and minor children, a recommendation which was confirmed, so far as Canada was concerned, by Order in Council of March 26, 1919" (p. 160).

No mention is made of the understanding arrived at the Imperial Conference that Indian settlers in the Dominions (South Africa alone dissenting) would receive citizenship rights, nor of the mission on which Mr. (afterwards the Rt. Hon'ble) V. S. Srinivasa Sastri went to Australasia and Canada to urge the people in those countries to accord friendly treatment to Indians within their gates. Canada has not chosen to follow the example set by some of the other Dominions in "citinizing" Indians -- to use an expressive Canadianism. No wonder the omission.

This is, however, an isolated instance in which only a partial statement appears in the *Year Book*. Judged as a whole, it is a remarkably candid and fair record of events; and the inferences drawn from the carefully sifted statistics reproduced in the book almost invariably err on the side of modesty.

—ST. NIHAL SINGH.

INDIAN TRANSPORT COSTS, by Mr. F. P. Antia, published by D. B. Taraporevala Sons & Co., Bombay. Price Rs. 3.

This book consists of ten chapters, the first of which is in the shape of an introduction to the subject and the last is in the nature of concluding remarks by the author. The intervening chapters deal with transport costs in both pre-Railway and post-Railway days. The book is an interesting one, especially as it deals with a subject which is very important in these days of competition in all branches of trade and commerce in this country. Transport charge is a very important item in the make-up of the price of every commodity and any change in this expenditure is bound to be reflected in the volume of trade and commerce of a country. The author has carefully shown in the different chapters the changes that have taken place in this particular item of expenditure with the advent of

railways in India and the consequential effect on the volume of trade of the country. The provision of a number of charts has added a good deal to the value of the book. The author is to be congratulated on dealing with a subject which is very important in modern commerce, and, to all intents and purposes, he has dealt with the subject satisfactorily. We have, however, to make one adverse remark, viz., that the printing might have been considerably improved as certain mistakes occur at places which could have been easily avoided by more careful proof-reading.

—M. K. G.

A REVIEW OF "REVIEW OF THE NEW LEGISLATION CONCERNING ECONOMIC AGREEMENTS (CARTELS, ETC.) IN GERMANY AND HUNGARY," prepared for the Economic Committee of the League of Nations by Doctor Siegfried Tschierschky, published by the League at Geneva in 1932. Pp. 52. Paper cover. Price Re. 1-6 or 40 cents.

The work under review is a supplement to the "Review of the Legal Aspects of Industrial Agreements" prepared for the Economic Committee by M. Henry Decugis (of France), Mr. Robert E. Olds (of the United States of America) and Doctor Siegfried Tschierschky (of Germany) and published by the League in 1930. During the second half of 1930 the legal provisions in force in Germany which were collected by Dr. S. Tschierschky and appended to the League's aforesaid publication of 1930 underwent modifications to suit the new conditions introduced by a period of economic depression and distress. These modifications give us an idea of the forms of State interference in the domain of price-control by cartels, etc., and of the important changes introduced in the relationship between the State and Cartels, etc. It, therefore, became necessary to analyse these provisions and to present them to the world in the form in which they have been placed before us for review.

These new legal provisions were introduced by the German Government to supervise and influence the policy of price-fixation by cartels, etc., and to strengthen its control over industrial agreements with a view to lower the level of prices on all important commodities. Provision was also made for the establishment of new compulsory cartels under State supervision.

The success of these measures can be judged from the fact that on December 8, 1931, an emergency decree introducing more drastic restrictions on economic freedom had to be passed to protect trade and finance, and to safeguard the peace of the country.

As regards the legal position regarding economic agreements in Hungary Dr. Tschierschky appended a separate review to the League's aforesaid document of 1930. The changes introduced in Germany after 1930 resulted in the promulgation of a parallel law in Hungary on October 15, 1931. This new law is a definite improvement on the German Decree on Cartels of November 2, 1923, and deserves to be regarded as a most up-to-date law on the subject of economic agreements.

The subject has received full justice from the hands of Dr. Tschierschky. He writes with clearness, nerve and animation. His work is a masterly contribution to the existing literature on the subject and deserves to be read with interest by all those who are interested in the subject.

S. P.

THE BROKEN BALANCE OF POPULATION, LAND AND WATER

AN ECOLOGICAL CONTRIBUTION TO POPULATION PROBLEMS

BY

DR. RADHA KAMAL MUKHERJEE,

Professor of Economics and Sociology, University of Lucknow.

As we follow the course of the historic river Ganges towards the delta, the rainfall, the climate, the agriculture, and the density of population improve. It is significant that agricultural prosperity which is so closely bound up with the river system fluctuates with the vicissitudes of the rivers, streams and drainage. Everything points to a steady decline of old alluvial tracts and the emergence into prosperity and numbers of new alluvial tracts farthest towards the delta. Thus the Himalayan rivers which must once have built up with silt deposit the upper plains of the Gangetic valley have now cut deep channels in the very plains which they originally formed, and not only cease to fertilise them with fresh deposit, but actually erode and gradually but continuously carry away the silt which they once laid on them. This work of destruction is assisted by the numerous feeders which are cutting more deeply every year into the rich layers of deposit and carrying the most fertile elements of the old silt into the Ganges, Jumna and other large rivers. There goes on in the old alluvial plains a continual process of destruction and renewal. At each bend the concave bank is being eroded, while the opposite shore receives a new alluvial deposit to fill up the void left by the receding river. After a period of years the process is reversed, or the river suddenly cuts a new bed for itself. Between these processes, however, there is an enormous wastage of soil.

In Tahsils Etawah and Bharthana, district Etawah which is flanked by the rivers Jumna and the Chambal there are 41,077 and 40,634 acres respectively of waste, the proportions being 15·06 and 15·27 per cent of the total areas.

The wastage in the district as a whole has been estimated to be not less than 11 cubic feet of soil per second, equivalent to a steady outflow of earth in stream 13 feet wide and 2 feet deep flowing at the rate of three miles per hour. The processes of erosion and ravine formation commenced within the last four centuries. From the prevalence of old stone sugar mills, the alignment of the old Mughal Imperial road still to be traced by its *kos* marks, the examination of old wells of known antiquity, as well as from the study of ancient records it would seem probable that most of the erosion has occurred during the last 400 years. Along the Jumna, old stone sugar mills are found in thousands. In two villages alone over 500 mills were found, in one 600 and in another over 250. The loss of fertile soil that has been carried from different districts into the larger rivers during the last three or four centuries is incalculable. It is in the Chambal-Jumna tract that the tangle of wild and sterile ravines sloping from the uplands to the river bank shows its worst features. There is a rough country along the Chambal which drains the Native States of Gwalior and Dholpur and finally joins the Jumna below Etawah. As far as can be seen one meets here a labyrinth of rugged ravines and green valleys covered with acacia jungle, every prominent bluff showing the ruins of some robber stronghold. This has been for centuries a No Man's Land occupied by wild Rajput tribes, robbers and raiders by profession, who settled on the flank of the Imperial highway through the Doab and were a thorn in the side of the Mussalman administration.¹

The process of ravine formation is aided by the fact that as a result of concentration of population we find in a mature valley very little of forest belt left on the banks of the rivers which might

¹ Crooke : *North-Western Provinces of India*, p. 26; also *District Gazetteers*, Etawah, Agra and Muttra.

protect them against erosion during the monsoon rains. In all ravine tracts the village communities are accordingly found to check erosion by building dams where the ravines are wide enough and the sides too have often been carefully terraced. Though such areas often provide excellent pasturage for domesticated stocks and have led as in Etawah to great development of the dairy industry yet the onslaught of these beasts against the inadequate vegetative cover further aggravates the dangers of scour and overdrainage. Thus, the gain to cattle-breeding and dairy may be offset by further loss of culturable land. The ravines present a further danger to the village population in the shelter it easily affords to bands of robbers and bandits, especially in its inaccessible portions. The intensity of grazing will be evident from the fact that one million animals grazed over 5,000 square miles only in the forests of the United Provinces.

An onslaught of herds and flocks continued for generations cannot but lead to the deterioration of vegetation thereby facilitating soil erosion. There is often a thin covering of scrub jungle, which hardly can absorb any portion of the excess water during the heavy rains. With the hardening effect of the tread of animals and rapid drainage, the monsoon rains penetrate to a depth of few inches only, and this quickly dries, leaving a soil almost destitute of moisture down to the underground spring water level 100 feet or more below. This has reacted very unfavourably upon the agricultural population. The gradual loss of fertile lands caused by the extension of ravines along the banks of the Ganges and the Jumna and their tributaries is on the aggregate serious. It has been estimated that the total area of such desert-like and inhospitable ravines in the United Provinces alone is between half a million and a million acres.

The destruction of forests and indiscriminate extermination of grassland increase both floods and droughts, alter both the time and duration of the river flood, factors of great importance to agricultural prosperity; while the silting up of river bottoms spells decline of the mature portion of the valley and especially

the delta region. Nowhere are forests and grasslands more important for agriculture than the tropical and subtropical regions where the vegetation not only conserves the moisture and ensures fertility by spreading a cover of silt but also prevents the ground from being over-heated and rendered dry by the sun.² Deforestation in these regions is particularly harmful in its effects towards upsetting the balance between the factors which determine climate and hydrographical conditions. The alternation of drought and floods in Northern India is merely a symptom of such loss of ecologic balance which man has periodically brought about by either excessive increase of numbers or abuse of vegetation in dry and semi-dry areas of the plain.³

The great densely populated Gangetic plain is now practically bare of forest growth. It is inevitable that with the disappearance of the forests, the meteorological conditions of the Gangetic valley gradually would change. It has been estimated that of the water-vapour which is condensed as rainfall over the land, about two-thirds is provided by evaporation over the oceans, and the remaining third by evaporation and transpiration over the land. The latter contribution is made up of evaporation of rainfall intercepted by foliage, evaporation from the soil and transpiration, and estimates are made of these three factors for forest, crops or grass land, and bare soil. The figures are expressed as percentages of an average rainfall of 30 inches a year; for forests they give interception, 15; evaporation from soil, 7; transpiration, 25; total, 47 per cent. For crops evaporation from soil, 17; transpiration, 37; total 54 per cent. For bare soil evaporation 30 per cent. Thus the replacement of forests by field crops or grassland would tend to increase the supply of moisture to the air and, therefore, the general rainfall slightly; replacement by bare soils, would decrease the general rainfall slightly. The changes in the run-off are likely

² Report on Agriculture of the United Provinces submitted by the Royal Commission on Agriculture.

³ The writer's *The Concepts of Balance and Organisation in Social Economy, Sociology and Social Research*, August 1932.

to be more noticeable, replacement of forests by crops would decrease the run-off by 15 per cent, and make it less regular, replacement by bare soil would increase the run-off but would make it highly irregular. A forest 30 feet high may be considered as adding about 30 feet to the effective height of the ground, and this should increase the local orographical rainfall by 1 or 2 per cent.⁴ The role of forest and grass in reducing run-off and erosion has been proved also by studies of Lowdermilk on cultivated field and temple forests in China, in which a ratio of 59: 1 was found. More recently in the chaparral of Southern California Lowdermilk and associates found a ratio as high as 100: 1.⁵ The greater friction of the wind with tree surface compared with open ground is another factor. To this may be added, in favourable mountain situations an increased supply of water collected mechanically from clouds which envelop the forests. Forests drawing their water-supply from deep sources possibly exercise a slight mitigating effect on droughts. On account of the widespread destruction of forests, throughout the heavily populated Ganges valley the rainfall in some parts is already becoming more scanty and the heat of the hot weather months more intolerable. It is not improbable that in some distant future the Ganges valley may share the fate of the Indus valley, where once there was smiling plenty. The traces of ancient river beds and sand-buried cities extended over a vast space in the desert country east of the Indus testify to the gradual desiccation of a once fertile region. The debris and mounds vestiges of a forgotten civilisation recently excavated in the sandy deserts of Harappa whisper a tragedy of famine, despair and abandonment. In the south-western portions of the Doab the desert has already appeared. Further towards the north-west

⁴ C. E. P. Brooks: The Influence of Forests on Rainfall and Run-off. *Meteorological Magazine*, December 1927.

⁵ W. C. Lowdermilk: *The Changing Evaporation Precipitation Cycles of North China*. Proceedings of the Engineering Society of China, 1925, quoted by Clements.

we have the semi-desert tract where can be marked the abandoned bed of one of the greater Punjab rivers, the Hakra, which was a live river probably up to early Muhammadan times and then lost itself in the sands. It appears that the watering of the Punjab rivers gradually transferred the Sutlej from the Hakra system to the Indus system, the Saraswati and its associated rivers were then unable to maintain a flow to the Hakra Channel and dried up. The much discussed "westing" of the Punjab is due nothing more than the capture of the rivers in the sands. Thus the Indian desert extends north-east to broad sandy wastes which merge into the scrub covered plains characteristic of the south-western portion of the United Provinces. This region was formerly productive and well watered, and composed large and prosperous towns which are now insignificant and dependent for such prosperity as they enjoy upon modern irrigation canals. The change in meteorological conditions is probably due to long continued human settlement and increase of numbers, extension of cultivation and contraction of forests which formerly protected the head-waters and drainage area generally of the Hakra, the Sutlej and the Jumna, and their associated rivers. For not far distant is Kurukshetra which was the first permanent home of the Indo-Aryans, the centre from which their culture gradually spread towards the east and the south-west.

There is yet another way in which population pressure has brought injury to man, making barren what was once a fertile region. Throughout the Gangetic plain, apart from land which has been rendered barren by erosion there are vast stretches of what are called Usar land. These alkali lands cover about two million acres in the United Provinces alone; they are to be found mainly in the country between the Jumna and the Ganges, and between the Ganges and the Gogra. In those tracts of the United Provinces and Bihar where the soil is close in texture long human settlement has meant an intensive perennial irrigation coupled with surface tillage. This has produced vast expanses of dead alkali land.

We thus realise that the concentration of population in the fertile alluvial plain itself leads to exhaustion and loss of fertility of the soil in various ways. Even in the most fertile tracts deserts and barren lands appear reacting most unfavourably upon both the economic condition and the well-being of man. Due to continuous exhaustion of both tilled and pasture lands the soil becomes depleted of certain mineral ingredients. In considerable parts of the plain phosphorus is deficient in the soil and its effects on the health of both cattle and human population are far-reaching. Ill-nourished cattle become less efficient for drawing the plough and lifting the water for irrigation and yield less milk. On account of imperfect cultivation and inadequate manuring crops suffer both in quality and quantity. Thus fewer animals are kept by the cultivator and he himself suffers due to faulty nutrition. Malnutrition thus pursues its harmful course in an ever-widening vicious circle; the cultivator is too often ill-nourished and ravaged by disease due commonly to lack of nourishment; his beasts likewise obtain inadequate nourishment while both toil wearily⁶ in a heartless effort to extract from the ill-nourished earth enough to keep them from starvation.

Both man's ignorance and improvidence as well as natural causes check the aggregation of population beyond a certain stage. Thus the population tends to advance onward along the course of the rivers towards the more fertile region of softer alluvium. On the other hand, in the older and harder alluvium the excessive pressure of population leads to a change of hydrographical and agricultural conditions for the worse, upsetting the ecologic equilibrium and bringing about, first, a decline of the standard of vegetation and of fauna, and then of human numbers and living standards. The continuous expansion of agriculture and irrigation due to population pressure in the south-western portion of the plain has led to the depletion of subsoil water-reservoirs and

⁶ See Mc Garrison's evidence, *Report of Royal Agricultural Commission*, Vol. I, Pt. II.

decline of the water level; while the encroachment on marshes, grasslands and forests has decreased humidity as well as fertility of land, letting loose the forces of erosion and run-off. The process of desiccation has already told on the breed and mortality of cattle, which can stand neither the increased strain due to the fall of the well water level nor the chronic fodder famine. The diminution of the numbers of live stock and the deterioration of their breed are found associated with agricultural decline and general lowering of vitality of the human population in areas which were once smiling with milk and honey. There can be no surer evidence of population pressure than a close correspondence between the rates of reproduction and mortality and the fluctuations of the cropped area, as shown in two central districts of the upper plain. (Charts I and II.)

Nature has a safety valve in the forces of natality and mortality which would not permit animal and human populations to multiply up to the extreme limits of food-supply, for no system of living community can work unless there is some adjustment to the needs of the future.⁷ With animals as well as humans migration in response to an unfavourable habitat acts as a sort of safety valve reducing the chances of starvation and resulting in a readjustment of the density of numbers in different places. Elton, indeed, emphasises the importance of the migratory tendency of animals as contributing towards a solution of the animal population problem and offering a means of enormously increasing the possibilities of adaptive radiation.⁸ The study of human numbers in the congested Ganges plain, where migration may be roughly estimated as amounting to only 5 per cent of the total population seems to support the older hypothesis that adaptation is produced by the elimination of the unfit from a *stationary* population of animals in which new hereditary variations are

⁷ The writer's *Population Balance and Optimum*, Proceedings of the International Population Congress, Rome, 1932.

⁸ Elton : *Animal Ecology and Evolution*.

constantly being produced. Both natality and mortality are here matters of ecologic adjustment striking out a normal balance of numbers with the ecological area, where the evolutionary processes are at work with whole and more or less sedentary populations.⁹ Thus the movement of population in certain areas of the Ganges valley is similar to that of bacterial population confined in a test tube, or of rodent population in a certain range of territory, tending to follow Pearl's logistic curve. In what decade the equilibrium density has been reached in a particular district depends upon agricultural and, especially, hydrographic conditions. But no sooner is it reached than we find the tendency towards a decrease of density either through decreasing survival rate or through a permanent lowering of the birth-rate. (Charts I and II.) Thus the population trend seems to be alike in human and animal and bacterial populations when they reach saturation density.¹⁰ Statistical evidence of this is further furnished by some of the congested districts of the Ganges valley where the population after reaching a saturation density tends to show a lower biological vigour as indicated by the "vital index." $(100 \frac{\text{births}}{\text{deaths}})$ This constant has been effectively used by Pearl to measure the biological health of a population and to indicate its probable future course. If the ratio 100 births/deaths is greater than 100, the population is in a growing and in so far a healthy condition. If it is less than 100 the population is biologically unhealthy. No single measure gives so sensitive a measure of the vitality of a population. From the vital indices we may easily conclude that populations, after having over-stepped the saturation density, have become biologically unhealthy. The damage done by the epidemics to these populations is much severer than elsewhere.

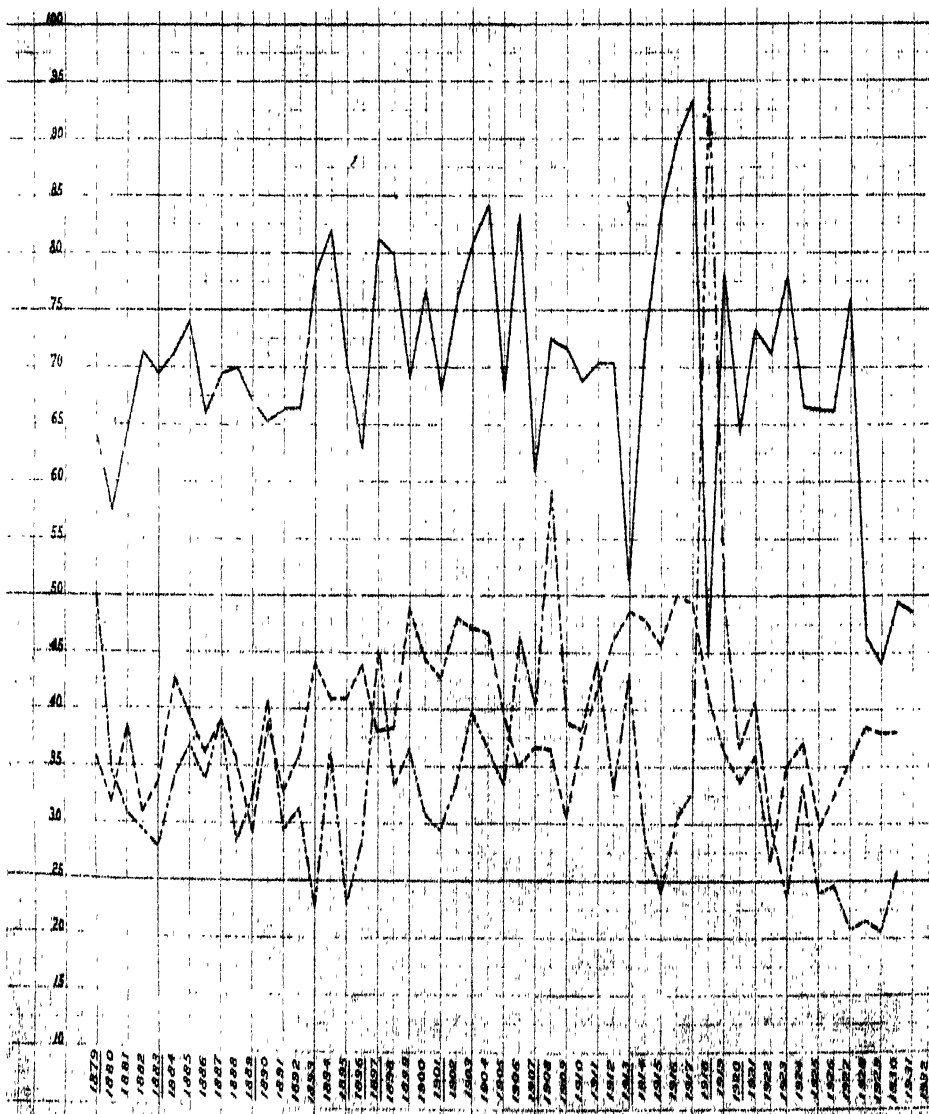
⁹ The writer's Optimum and Overpopulation, *The Indian Journal of Economics*, January 1930.

¹⁰ The writer's The Criterion of Optimum Population, *The American Journal of Sociology*, March 1933.

Districts.	Years of Saturation Density.	Vital Indices before the Year of Saturation Density.				Vital Indices in the years of epidemic outbursts.				Vital Indices after the Year of Saturation Density.						
		1881	1886	1891	1896	1905	1908	1918	1901	1906	1911	1916	1921	1926	1930	
Agra	... 1901	145.5	100	165	133	52	54	79	142	94	98	161	108	146	162	
Aligarh	... 1901	180	96	143	150	92	62	31	153	121	90	185	105	138	155	
Cawnpore	... 1901	106	109	92	121	86	86	42	126	63	94	155	84	130	123	
Etawah	... 1901	126	92	110	155	118	62	43	150	75	93	161	88	132	146	
Lucknow	... 1901	125	121	99	113	75	59	44	113	103	93	896	97	152	92	
Muttra	... 1901	138	90	136	147	36	39	28	118	98	98	189	116	129	129	

RELATION BETWEEN HARVESTS AND VITAL STATISTICS ETAWAH

SCALE
 BIRTH RATE _____ 1CM=5 PER THOUSAND
 DEATH RATE _____ 1CM=5 PER THOUSAND
 TOTAL CROPPED AREA _____ 5CM=1 LAKH ACRES
 DROUGHT YEARS ARE UNDERLINED. 1905, 1908, 1918 ARE EPIDEMIC YEARS



RELATION BETWEEN HARVESTS AND VITAL STATISTICS CAWNPORE

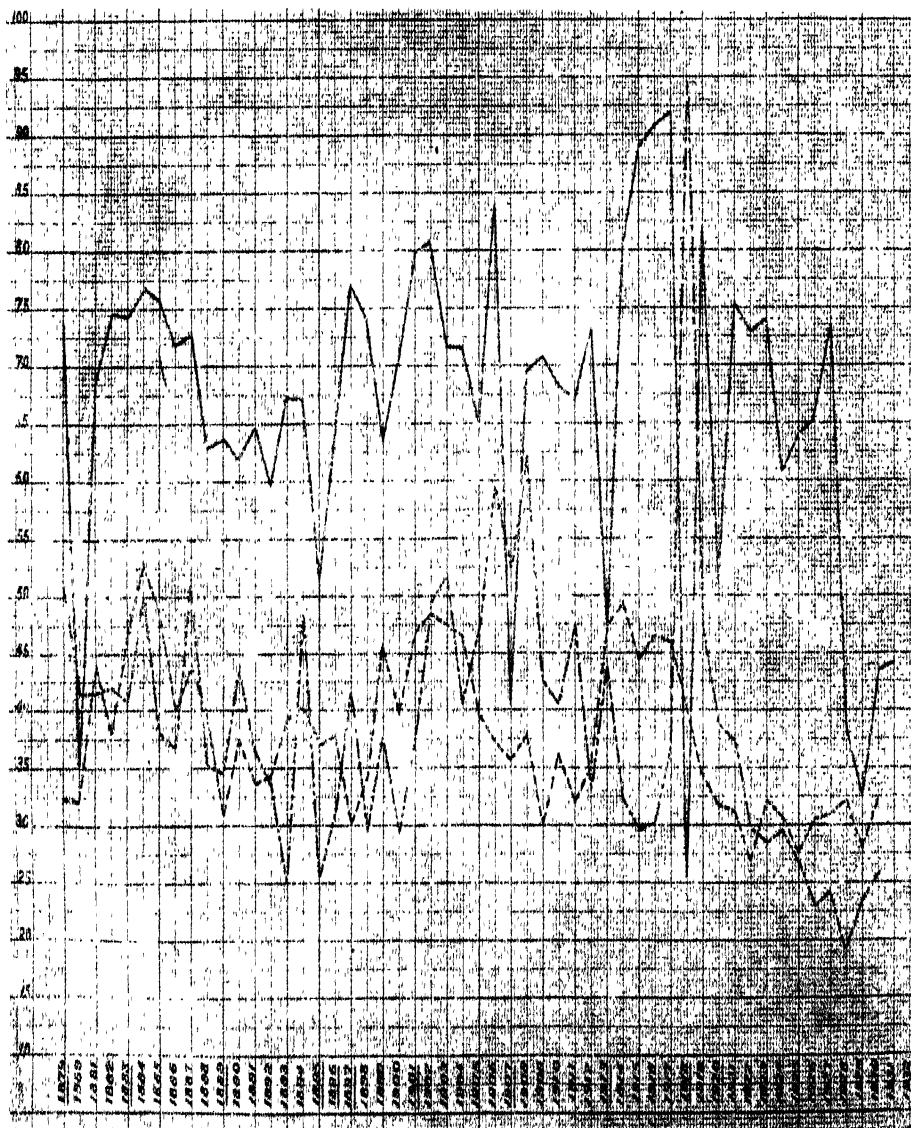
SCALE

BIRTH RATE _____ 1CM=5 PER THOUSAND

DEATH RATE _____ 1CM=5 PER THOUSAND

TOTAL CROPPED AREA _____ 5CM=1 LAKH ACRES

DROUGHT YEARS ARE UNDERLINED 1905, 1908, 1918 ARE EPIDEMIC YEARS.



POPULATION PROBLEMS

BY

H. B. BRIDE

मृत्युर्नैवेदमावृतमासीदशनायया । अशनाया हि मृत्युः ।

बृहदारण्यक उपनिषद् १ । २ । १.

The first thing that strikes one when one reads the title of the paper is its wording. I am not sure whether "Problems" or "Problem" is intended. If it is really "Problems," I am afraid, the subject becomes very wide, vague and unwieldy. It may then include all problems bearing on population's rise, growth and decay and its many-sided activities. It may mean a consideration of the problems in Anthropology, Sociology, Biology, Medical Science, Ethics, Theology and Politics; we may add Aesthetics and Metaphysics as well. This is a task far beyond the time, capacity and jurisdiction of the Economic Conference.

It may be urged that we should confine ourselves to a consideration of the economic aspects of population problems only. But, even then, as I shall presently try to show, the field is too vast to be traversed in three days' sittings.

Nowadays, a tendency is manifesting itself among some economists to widen the scope of economic science and to "re-appropriate" a part of the field that ought properly to belong to other social sciences. Prof. R. G. Tugwell describes the trend of modern Economics in some such words as these. Says he—The main concerns of life may not have altered very greatly since the earliest times of human association, but some interests have been forced into a new prominence by the developments of the last century or two. We therefore ought to raise the levels of

intelligence that should enable us to control the forms of the new world and turn them to the account of human needs. This is indeed, a difficult task. It calls for a more realistic and understanding analysis and explanation of the working forces in our civilisation, so that the real needs of men may be visualised and finally met. And this is the business of the social scientists, and of these, not the least, the economist. All the problems of modern life are imbedded in a setting of industrialism, and this is more and more true as time goes on; for, industrialism is rapidly sucking up the energies and shaping the life of every individual who lives upon the common earth with all the rest of us. This aspect is of recent growth. It began with the industrial revolution and took men by surprise. The following is a list of all these "factors" which the economist must meet and which will help us in visualising the common setting of all these problems.

1. *Problems of the working life* :—

- (a) *Conditions of working life* :—hours of work, monotonies, insanitary surroundings, inefficient workmanship and supervision, etc.
- (b) *Incomes* :—difficulties of correlation between changing standards, changing price-levels and wage-rates.
- (c) The unsuitability of modern production for the utilisation of creative abilities.
- (d) Conflicts involved in competition among individuals and groups.
- (e) The struggle toward co-operation and co-ordination in industrial individuals and groups.
- (f) The continual changing of the natural resources and supplies of power depended upon by industry.

2. *Problems of the home life:—*

- (a) The passing of rural culture, the growth of urban culture, the consequent destruction of home life, and the struggle toward a new basis for family grouping.
- (b) The relation between husband and wife and between parents and children under the new conditions.
- (c) The struggle to raise living levels and to meet the conditions of new ideals of life all of which involve enlarged consumption.

3. *Problems of smaller group relationships:—*

- (a) The decline of the old religion and the longing for a new religious experience with a recognizable relationship to daily secular experience.
- (b) The effort to build a new morality for social rather than individual control.
- (c) The movement of educational responsibility out of the home and into the school.
- (d) The decline of individual arts and the attempt to create industrial and social arts.

4. *Problems of greater group relationships:—*

- (a) The slow struggle toward a recreation on a functional basis of governmental structure.
- (b) The relations and inter-relations between producing and consuming groups.
- (c) Problems of war and peace.

- (d) Problems pertaining to mixtures of different races and cultures brought about by migrations.¹

A scrutiny of the above list discloses the fact that several of the problems included in Nos. (2), (3) and (4) are really for politicians, theologians and social reformers.

These considerations bring us to the task of defining the scope of economic science in general and of population problem in particular. That is, however, not quite relevant for the present. Only, I may be permitted to say that this question has a long history. Plato, Aristotle, Thomas Aquinas and several others in the pre-Malthusian times have considered the population problem from non-economic viewpoints. More recently, the Neo-Malthusians have occupied themselves more with Birth-control, Eugenics, etc., than with anything else; Malthus's preventive checks have come in for a rigorous analysis at their hands. But their treatment of the subject is, I believe, primarily non-economic; perhaps the subject itself is such. Again, if we read the proceedings of the World Population Conferences held in 1927 and 1932 we find therein non-economic discussions preponderating over economic ones. To use Prof. J. M. Clark's phraseology, Economics is being more and more "socialised" so as to be rendered "comprehensive" and "non-Euclidean."

On the other hand, there are a few stray voices sounding a warning against the "socialisation" of Economics. Cairnes, for instance, when discussing Rent, says:—"Rent is a complex phenomenon, arising from the play of human interests when brought into contact with the actual physical conditions of the soil. The political economist does not attempt to explain the physical laws on which the qualities of the soil depend; and no more does he undertake to analyse the nature of those feelings of self-interest in the minds of the landlord and tenant which

¹ Prof. R. G. Tugwell's paper on "Experimental Economics" in *The Trend of Economics*, pp. 375-77.

regulate the terms of the bargain. He regards them both as facts, not to be analysed and explained, but to be ascertained and taken account of; not as subject-matter, but as the basis of his reasoning. If further information be desired, recourse must be had to other sciences: the physical fact he hands over to the chemist or the physiologist; the mental to the psychologist or the ethical scholar."² In America, Davenport strives to maintain a rigorously scientific attitude in Economics. Says he:—"Peruna, Hop Bitters, obscene literature, indecent paintings, picture hats and corsets are wealth, irrespective of any ethical or conventional test to which they may or may not conform. Being marketable, price-bearing, they are wealth. So likewise of services; in no sense is economic productivity a matter of piety or of merit or of social deserving. Were it otherwise it would be necessary to change one's political economy according as one were talking to a prohibitionist or a German. What is the economist, that he should go behind the market fact and set up a social philosophy of ultimate appraisals?" F. W. Taylor, in an equally uncompromising vein maintains the old abstraction. "To produce is to create utilities," and "utility includes all sorts of fitness to satisfy wants without respect to the character of the wants."³ Prof. L. Robbins has endeavoured, in a recent book of his, to define the limits of economic science, and his argument, if pushed to their logical extremity, would land us on the same ground.

Following these authorities we may confine our considerations of "Population Problems" within the limits prescribed by them. But even then it is impossible to do adequate justice to the subject in a short paper. A brief discussion of a few salient features is all that is attempted here.

The first point that I should like to emphasise is the shifting of the viewpoint from which the "Population Problem" is to be

² Quoted by F. S. Deibler in his *Principles of Economics*, pp. 11-12.

³ *The Trend of Economics*, p. 469.

considered. A noteworthy change has taken place during the last fifteen years. The Great War has altered our angle of vision. The problem is not exactly what it was for Malthus and his successors until recently. To Malthus it was mainly an agrarian problem. The peculiar conditions of England of his times provoked him to reflect in the particular direction. For several decades this Malthusian tradition had been maintained without break. In the meanwhile, the forces set into motion by the industrial and political revolutions were working at an accelerated pace to change the surface of the earth. Protectionism and Nationalism were giving way to *laissez faire* and Internationalism. The productive power of soil and the purchasing power of man were expanding to an unprecedented extent. Difficulties of communication and transport were fast disappearing. Malthus had dreaded a national deficit of food-stuffs; but within a century afterwards the spectre of food-famine had almost been laid to rest. The Malthusian population problem had ceased to trouble men's minds.

In fact, however, it was not dead once and for all. Phoenix-like it got a fresh lease of life from the ashes of the Great War. Formerly it was an agrarian problem; now it is an industrial one. It is now the Unemployment Problem. This metamorphosis cannot be better described than in the words of Beveridge.⁴ In the chapter headed, "Unemployment and Over-population," he writes thus:—"The opening chapter of this book, twenty-one years ago, was devoted to keeping the problems of unemployment and population distinct. In the chapter just concluded⁵ the problems have come together across the bridge of rigid wages. Supply of labour as a whole and demand for labour as a whole are normally kept in general adjustment to one another, that is to say, unemployment is reduced to the result of specific mal-adjustment of place, time or quality, by plasticity of wages. If it is possible

⁴ *Unemployment, A Problem of Industry*, Ch. XVII, p. 373.

⁵ *I.e.*, Chapter XVI.

for wages to become rigid at a point that is too high in relation to production per head of the total population, part of the population will not be able to find employment at these wages. This disequilibrium of wages and production may result either from a rise of wages unaccompanied by a corresponding rise of production per head, or from a fall of production per head unaccompanied by a corresponding fall of wages. In the former case, the result will be described as unemployment due to excessive wages; in the latter case it will be ascribed to overpopulation. In the former case, since it is real rather than nominal wages that are in question, the movement may be occasioned either by a rise in money wages or by their maintenance when the prices fall. In the latter case also there may be alternatives; production per head in any country may be checked either by growing difficulties in producing, i.e., through exhaustion of national resources or by diminished demand for its products, e.g., through competition of other countries or through imposition of tariffs.

‘ By all routes the end of the journey will be the same—part of the population standing idle . . . ’ The routes of overpopulation and rigid wages have converged to one end.

‘ The problem of population is not so easy today as it seemed to be when industry and international trade and applied science were in their infancy together. So long as economic development is envisaged mainly as the applying of successive doses of agricultural labour to a limited territory, the issue is soon reduced to the Malthusian one—of whether the capacity of increasing beyond his means of subsistence which man shares with all animals shall be offset by vice or by misery or by moral restraint. . . .’⁶ Nowadays, the problem has been complicated by two sets of factors. The development of industrial technique and organisation appearing to require for their greatest efficiency or concentration of labour far beyond agricultural standard introduces one complication.

⁶ Beveridge, p. 374.

The other complication is introduced by the development of international trade and national specialisation. The result is that the population problem is now, not agricultural and national, but, industrial and international.

The problem may be stated thus. Every civilised country is afflicted with stagnation and distress. It cannot sell sufficient of its own wares to let it buy those it needs from others. There is universal abundance and there is universal indigence. Science has raised the capacity of output sometimes a thousandfold, and so far as utensils and consumable things go, the race at large should be richer in practically everything. But this power stands half-paralysed everywhere for lack of purchasers, and its own potency is among the main sources of dead-lock. Plenty and Poverty are facing each other with a gulf between. How to bridge this gulf is the problem.⁷

This shift of emphasis is manifested in another direction also. It is no longer the problem of the race between number and subsistence in any limited area only. It is not the problem of the relation between the population and the agricultural resources of any particular country. For, the population that any one country can support at any given standard of living depends not solely on its own natural fertility and resources and its own achievements of industrial technique or co-operation, but how in each of these matters it compares with other countries. Therefore, the starting point for any fruitful discussion of population problems today is that population problem for every country is a problem for the whole of the world.⁸ We must analyse the distribution of the population of the world as a whole in relation to the economic production and consumption of the world as a whole. The varied activities of mankind in pursuit of material welfare

⁷ *The Observer*, January, 1933.

⁸ See Beveridge.

are interlocked too intricately to be considered in separate compartments. In other words, mere increase or decrease of the world-population, or mere increase or decrease of the world's material resources, by itself, is of no great significance. We must try to find out whether the world-resources are sufficient to meet the material needs of the world-population and whether they are or can be brought within the reach of the world-population, that is, whether the purchasing power of the world-population is or can be equated with the supply of the world-resources.

Considered thus, the problem will appear to be getting more and more alarming. The disparity between men and resources is growing. A large part of the population has been rendered unable to come by the means of bare subsistence even. In the countries on the eastern coast of the Atlantic there may be over 30,000,000 unemployed. If the average family may be considered as consisting of 3.5 units, then the West Europe countries must be having over 100 million people in a state of underfeeding and underbreeding. In the United States of America, the land of plenty and liberty, the tale is no less saddening. Even before the slump began in 1929, over four million had been evicted from factories there; and during the acute depression that followed, the figure reached ten millions. It means that over thirty-five million souls are there living a starvation life. The total population of the United States of America is a little over 120 million. That is to say, nearly 30 per cent of her people are starving!

England fares no better. Sir Gerald Hurst writes, "Until late years it was rare for any employee of the merchant houses in Manchester to lose his job. These establishments seemed to be most secure in the country Today they barely survive. And the main streets of Manchester are full of empty offices and warehouses to be let. One third of the better class shops have closed down. An army of clerks, buyers and salesmen cannot find work. Outside Manchester, the whole mechanism of cotton trade in which are bound up the prosperity of millions of people is largely paralysed. They have been largely,

dismantled, the machinery being sold as scrap. The whole of East Lancashire is in acute distress.”⁹

In fact, all the manufacturing nations are ‘in acute distress.’ Death is stalking in every street.

The Upaniṣadic idea expressed in the quotation at the start, seems to be in its course of fulfilment. But we need not lose heart. Death is the gateway to higher life.

मृत्योर्मुक्तमिदं नाम शक्तिः ।

⁹ *Fortnightly Review*, July, 1933 p. 60.

NEO-MALTHUSIANISM AND GENERATIVE EGOISM

BY

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[An attempt is made in this paper to show that the fear of the Neo-Malthusians is merely a nightmare; that their methods are injurious to the interests of our land. They have created a generative egoism which is sure to end in Racial degeneration.]

“ No—no money. Blow money ! It is a gospel of hard work. Too much money in the world now. Softens the muscles and puts on fat, and its influence is fatty degeneration for giver and taker. Don't talk of that. We want men who don't care a rap for it. We have no use for your cheques, but we have big use for you, if you will really work.”

Thanks to the vigorous propaganda of the Neo-Malthusians, the atmosphere today is charged with the cry of overpopulation. Parents with numerous offsprings who were once objects of veneration are now looked upon with contempt. The proud mother is now forced to hang her head down in shame against the attacks of the new-fangled theorists. In short, the country today is full of unwilling fathers, unhappy mothers and unwanted children. Procreation is beginning to be looked upon as a crime. Maternity

is looked upon in high medical quarters as a dangerous disease. To avoid this disease, many sexual vices are being practised. Mother is separated from child and husband is separated from wife. In a country grown grey with age-old tradition, this new gospel has come as a tremendous shock. No country has so much regard for children as ours where they are looked upon as representatives of God. Says Apastamba, "In the offspring thou art born again, that mortal is thy immortality." The repercussions of their teaching have, therefore, been particularly serious in India.

If India is really overpopulated, then no sacrifice is too much to cut down the population to reasonable limits. On the other hand, a careful examination of facts shows that India is far from being overpopulated. Overpopulation, like many others in Economics, is a relative term. Just as we cannot talk of income without reference to a particular period, so also we cannot talk of overpopulation without reference to the extent and productive capacity of the country. "A country can be said to be overpopulated only when the returns from all industries taken together—agricultural and manufacturing—are diminishing—that is, when the diminishing returns from agriculture are sufficiently large to wipe off all increasing returns from manufacture." Further, when judging the magnitude of the population of a country, we must never lose sight of the fact that the distribution of the wealth produced is as vital a factor as the total amount of wealth. A country can be said to be overpopulated only when its productive capacity is insufficient to meet the legitimate demands of its population. On the other hand, the productive capacity of the world, in recent years, has been increasing at a rate undreamt of before. In the words of Ramsay Muir, owing to control over Nature acquired by the application of new scientific ideas, the world today supports "a vastly increased population in a degree of comfort far surpassing that enjoyed by any generation of our ancestors." The marvellous increase in production is not confined to articles of food. The world's coal and pig iron production has

increased during the last century and a quarter by a hundredfold; cotton production has increased twentyfold; shipping eightfold; railway mileage threethousandfold. "The world," says J. Bourdon, "is still underpopulated. The increase of population may continue for a long period before becoming a danger to the food supply."

The question of overpopulation arises only when a country has reached its maximum productive capacity and when even this product is found insufficient to meet the wants of the people. Some of the countries in Europe have certainly reached their maximum productive capacity. Scientific methods have been systematically applied and nature has been harnessed to an extent unparalleled in the history of the world. But India is one of those countries which is yet a stranger to scientific progress. Her methods of cultivation are not very different from what they were in Vedic or Epic times. Until her lands are treated to scientific manure, what she can produce should only remain a matter of economic speculation. The average production of sugar per acre is one ton in India whereas it is four tons in Java and four and half tons in Hawaii; the yield of wheat is 1,250 lbs. per acre in India, while it is 2,000 lbs. in the United Kingdom and Switzerland. Efficient methods of cultivation are sure to add considerable wealth to the country. Not only are the prospects of intensive cultivation hopeful, but also those of extensive cultivation. Excluding the forest area and area not available for cultivation, we have 27 per cent of the total area still available for cultivation without any difficulty. If the entire available acreage is brought under cultivation, it has been estimated that we should require approximately double the number of agricultural labourers. The probable increase of produce from the Sukkur-Barrage Scheme alone, it is estimated, will be over 32 million maunds made up as follows:

Rice	...	...	...	...	3,700,000 maunds.
Wheat and Barley	...	...	...	...	23,000,000 ,,

Cotton	...	...	... 4,000,000 maunds.
Oil-seeds	...	...	... 2,250,000 ,,

But, if we are far from reaching the maximum productive capacity in agriculture, we are still farther away in the case of manufacture. India is just on the threshold of an Industrial Revolution. Students of Economic History know, more than anybody else, how much wealth industries have added to the national wealth of Western countries. Endowed as she is plentifully by nature, her chances of industrialising herself are plenty. Though it is not possible to say by how much her national wealth is going to increase, we are certainly on a firm ground when we say that as a consequence, her national wealth is sure to increase at least tenfold.

In the face of these possibilities, it is really amusing to be told that India is overpopulated. The Neo-Malthusians do not seem to realise that so long as God sends two hands with every mouth, the nightmare of overpopulation need cause no trouble. In the words of Kropotkin, the great Russian humanitarian, "Those only can be horror-stricken at seeing the population of a country increase by one individual every thousand seconds who think of a human being as a mere claimant upon the stock of material wealth of mankind without being at the same time a contributor to that stock. But we who see in each new-born babe a future worker capable of producing much more than his own share of the common stock, we greet his appearance." It is true that in India, we are witnessing an appalling poverty. But that has nothing to do with overpopulation. A family with a larger number of children may nevertheless be happier than another with no children at all. It all depends upon the collective purchasing power of the whole family. Even with a considerably reduced population, the same poverty may continue if people have not enough purchasing power. If any part of the body gives trouble, wisdom consists not in cutting away the part affected, but in restoring it to its original state. To think of cutting down the population, because people

have not enough to eat is only a shameful admission of our incapacity to make proper use of the immense potentialities of Nature. In fact the growth of population itself ultimately depends on economic conditions and the rate of growth adjusts itself to the growth of National Income and National Wealth. This view is based on facts relating to India as well as European countries and is as true for the Industrial West as for the Agricultural East. As compared with 177 persons per square mile in India, there are 666 in Belgium, 650 in England and Wales, 513 in the Netherlands and 332 in Germany. It is to her interest that population density should increase in India: for, in general, population density acts as a stimulus to national qualities and more especially to work and savings. "Whether the individuals of a Nation are gifted with a high degree of initiative, a very high form of civilisation may be obtained with a meagre population, although we cannot hide from ourselves that in all epochs, it was in the most densely populated zones that the highest manifestations of civilisations of the period have appeared.

In the words of Dadabhai Naoroji: "There is the stock argument of overpopulation. They talk and so far truly of the increase by British peace; but they quite forget the destruction by the British drain . . . so long as the English do not allow the country to produce what it can produce, as long as people are not allowed to enjoy what they can produce, as long as the English are the very party on trial, they have no right and are not competent to give an opinion whether the country is overpopulated or not. In fact it is absurd to talk of overpopulation, i.e., the country's incapability by its food or other produce to supply the means of support to its people, if the country is unceasingly and forcibly deprived of its means or capital. Let the country keep what it produces and then only can any right judgment be formed—whether it is overpopulated or not. Let England first hold hands off India's wealth and then there will be disinterestedness in and respect for her judgment. The present cant of the excuse of overpopulation is adding a distrustful insult to agonising injury. To

talk of overpopulation at present is just as reasonable as to cut off a man's hands and then to taunt him that he was not able to maintain himself or move his hands." J. A. Hobson goes still further when he says, "There is no evidence that the world's population is outrunning the natural resources; but on the contrary, the presumption is that for their fuller utilisation a larger population is necessary and thereby could be maintained at a higher standard of living."

Enough has been said in the foregoing paragraphs to show that the theory of overpopulation is a pure myth. Even granting for the moment that India is overpopulated, the writer has to point out that the propaganda carried on by the members of the Neo-Malthusian League is positively dangerous to the future of our land. The supreme importance of heredity is the great biological discovery of modern times. The cultured section of the population, it is needless to point out, is at once the greatest asset and hope of a country. The science of Eugenics aims at increasing by all possible means this section of the population, for the percentage of the cultured is a barometer of a Nation's prosperity. A proper programme should therefore consist of medical, legal and social measures designed to bring about an increase in the number of children from the superior grades of society. To that end, America is today carrying on a deliberate campaign to encourage procreation among the educated. Eugenic sterilisation aims at destroying the reproductive capacity of an individual by means of certain surgical operations which are carried out in accordance with the Law. This is carried on principally in cases of degeneracy such as lunatics and criminals. 'Vasectomy and Salpingectomy are operations very common in the United States of America.'

India is pursuing an exactly opposite policy. The Neo-Malthusians have begun from the wrong end. They are preaching their gospel to a section whose multiplication is of paramount importance to a country like India where mass illiteracy is the greatest stumbling block to her progress. The cultured are still

an insignificant minority in our land; this minority is sure to dwindle as a consequence of this new doctrine of the Neo-Malthusians. Many among the superior families, have already begun to limit their families to such an extent that there is every possibility of their breed being wiped out. To have no more than one or two children in order to make it easy to mount the social ladder should be unsparingly condemned. It is a sort of generative egoism abetted by the dangerous Neo-Malthusian propaganda. Snobbishness and desire for social advancement are found in all ranks of society; and the snobbishness which favours the limitation of families amongst the well-to-do is now doing a deadly injury to the race in India. Rome was ruined in olden days on account of a low birth-rate amongst the superior breeds and a high birth-rate among the inferiors.

The masses are quite ignorant of the Neo-Malthusian League; they are growing as fast as ever; the preachings of these population faddists are like water pouring off the duck's back. The latest census reveals a meteoric increase among the least cultured communities. That such a campaign is not to the interests of the country needs no emphasis. "If the French population had grown at the same rate as the German population, we should in 1913 have had 61 millions instead of 39 millions and Germany would have never dreamed an attacking of us. So war is the price France had to pay for her sad refusal to increase and multiply (Standing Room only. Ross) the present campaign is sure to widen the gulf between the cultured and the uncultured. The immediate need is a counter-propaganda against the attempts of this League. The path of duty is the road to racial progress. Our civilisation cannot be maintained if the better stocks have small families. In fact the call of Eugenics is to make the production of families of adequate size widely felt as a paramount duty of parents. Our country is well on its way towards a racial degeneration. This can only be checked by incorporating in our moral code the sacred duty of procreation among the higher classes and advocating this with religious zeal. This will also rescue our country from the dangers

of the new devices so ably described by Dr. Benjamin T. Tilton:
“It is not an exaggeration to say that thousands of women die annually from the effects of these illegal abortions and other thousands become chronic invalids or permanently sterile.”

THE PROBLEM OF INDIAN OVERPOPULATION

BY

JAFOR HASAN

It is a common fallacy that India is one of the most overpopulated countries of the world. European opinion, specially, has consolidated itself on the belief that most if not all of India's evils are due to the "plain and simple" fact that the Indian people are reproducing far beyond their means: hence the endless tales of scarcities and famines, diseases and epidemics, want and poverty. It would be worthwhile to examine in the light of recent investigations the problem of India's population.

How often has one heard that India is overpopulated? But what is the real meaning of overpopulation? Sociological research has shown that there are two different kinds of overpopulation—conveniently called the relative and the absolute. A country can be considered to have an absolute overpopulation only when it is unable under the best possible Government and economic organisation that human ingenuity can devise to provide itself with enough means of occupation. We might also take the factor of wealth into consideration, and say that absolute overpopulation is possible only in a country which in spite of an ideal Government and good agricultural and industrial organisation is unable to produce enough wealth for the adequate sustenance of its inhabitants. We know that the Industrial Revolution of the eighteenth century, along with the steady mechanical progress we have made ever since, and the revolution in the means of transport and communication of the nineteenth and the twentieth centuries have completely changed the characteristics of the population problem. Since food and raw material can now easily be imported from distant countries, it is no more necessary for every country to produce food and raw materials within its own boundaries. It must, however, provide

itself with enough means of occupation. If in any one country all known methods of production are employed and all natural resources utilised, and yet there is a surplus population which cannot be provided with wealth or occupation it is overpopulated in the absolute sense. The economic history of the world does not know of any instance when a country could be considered to have had an absolute overpopulation. If, at all, we might consider Central Asia at the time of the Great Aryan Migration to have been suffering of absolute overpopulation. Ignorance of mankind at that time was so gross and the known methods of production so primitive that it might have then been impossible to produce sufficient wealth for an ever-increasing population. The enormous strides that mankind has made since those remote times towards knowledge and progress have enabled countries to produce more wealth than could ever be imagined by any utopian of the mediæval ages. Today it is difficult to believe that for centuries to come countries with large areas like Germany, France, and Japan can have an absolute overpopulation. The rationalisation of industries and modernisation of the agricultural methods of production will enable these and similar countries to support a much larger population. If this is true in case of countries it must also be true in respect of huge subcontinents like India which, thanks to the varying kinds of soil and climate, can produce almost all kinds of fruits, vegetables, and cereals, and which has (though still hidden under its surface) almost all kinds of minerals. Such conditions prevailing, India can most assuredly not be considered to be already overpopulated in the absolute sense. On the contrary, opinions of men, whose knowledge cannot be disputed and whose authority cannot be denied, lead us to believe that India is not producing one-tenth of what it could by methods already known to humanity. Nearly a decade ago Sir M. Visvesvarayya—whose ability as an Economist has been well recognised by our Conference by making him our President—wrote: “under favourable conditions, with steadfast perseverance in a settled national policy, and by the introduction of Science, modern machinery and up-to-date

business methods, the production of the country from agriculture and manufactures could easily be doubled within the next ten and trebled in fifteen years."¹ Prof. Banerjea suggests that "under favourable conditions India can bring forth six to eight times its present produce."² The same view has also been advocated by Arnold Lupton to the effect that "this great country and this great people with its enormous well-ordered population sufficient for all the work it has to do, could, if wisely guided, support double its present number in health, plenty and pleasure."³ Any number of similar quotations could be given to prove that India's phenomenal under-production is not due to natural causes. If India is not producing one-fourth of what she could or should it is not due to a dearth in natural resources but the fault of man. Man alone has to blame himself for not utilising the wonderful and limitless resources placed at the disposal of humanity by a benevolent Nature.

I, therefore, do not and cannot hold that India is overpopulated in the absolute sense. But what about a relative overpopulation?

Relative overpopulation may be defined as that condition where there is such a surplus that the means available at a given time and under existing conditions are incapable of producing enough wealth necessary for the maintenance of a reasonable standard of living for all. In other words, if in any given country *on account of avoidable circumstances* there is neither enough wealth nor means of livelihood for the existing population, the country is relatively overpopulated. The avoidable circumstances may be illiteracy, misgovernment, maladministration, disunity, internal or external warfare, negligence of industries, absence of compulsory education, lack of industrial, commercial, and agricultural training. These are the very problems which confront India. There

1 *Reconstructing India*. London, 1920, p. 10.

2 "Landwirtschaftliche Bericht," Parey. Berlin, 1926, p. 481.

3 *Happy India*, London.

are large natural resources and the inhabitants are endowed with different kinds and grades of latent talents, and abilities, and yet she is not maintaining a reasonably high standard of living for the population. Hence India is relatively overpopulated. It has undeniably a strong relative overpopulation. The conditions in most other countries are, however, similar to those of India; hence I make bold to say that almost all countries of the world are suffering from relative overpopulation. As long as there are millions of unemployed people who, in spite of ability, energy, and will, are unable to find work; as long as even many more millions are under-employed, and as long as milliards of people are suffering from lack of necessities, wants and comforts, most countries in the world and, not the least the so-called progressive and civilised countries, are suffering of *relative* overpopulation. England, with innumerable possessions, colonies, protectorates and mandates whose aggregate size is 150 times larger than its own; England, with a world-wide empire in which the sun never sets, is suffering of chronic unemployment. The poverty and misery of its working classes are no less today than what they were at the beginning of this century.⁴

India's problem of relative overpopulation exists only because India's vast natural and human resources are neglected. Many of us have come to the conclusion that India is not producing even one-fourth of the wealth which it could produce by rationalizing the methods of production. The story of the niggardly treatment of our industries is long and lamentable to relate. But more long and more lamentable though seldom stated or acknowledged or even realised is the story of how our customs and social laws hamper our economic progress in the quest of wealth. The political and educational institutions of the State, the cultural and social characteristics of our nation, are such that they do not

⁴ Compare *Has Poverty Diminished*, by A. A. Bowley, Sc.D., F.B.A., Prof. of Statistics, University of London and M. H. Hogg, Research Assistant at the London School of Economics, King, London, 1925.

discover the latent abilities of the individuals, vitalize their aspirations, and help them to realize their ambitions. It would lead us too far to dilate on the causes of the negligence of India's potentialities and resources. Suffice it to say that India has not only vast natural resources at her disposal but also latent abilities. Given a fair chance and a right lead, India will become one of the most progressive nations of the world. She will then be able to support a hundred crores of people on a decent standard of living. Today she is somehow sustaining thirty-five crores. Her standard of living is so miserably low that it can hardly be called humane. Nobody who has the slightest notion of the condition of the working classes in most of the industrial cities of India, and of the agricultural labourers and real tillers of soil, can pretend that the standard of living is such as makes life worth even living.

Under the existing conditions India's relatively strong overpopulation is due to the fact that it is not producing enough to maintain its population on a decent standard of living. All that is produced, India is not able to retain, and the little that is left is very badly distributed. India has thus to solve these three problems (viz., under-production, drain, and maldistribution) before she can ever afford to increase her population. Even if Indians were free and politically independent she could hardly manage (for decades to come) to provide 355 millions with sufficient wealth or means of occupation.

Hence the vital necessity of checking India's population! In the absence of the older methods of checking the growth of population (namely, infanticide, negligence of female babies, prohibition of widow remarriage, etc.) it becomes of paramount importance that the problem of India's relative overpopulation must somehow be solved. There is only one solution to offer: birth-control and sterilization of the unfit! The alternative to this method is more poverty, more misery, more mortality, more diseases, more epidemics, more scarcities; in a word, a more wretched living.

With millions of our countrymen living in abject poverty, always on the brink of semi-starvation and hunger, devoid of

sufficient clothing and housing, there can be no justification for any further increase in population. I strongly hold that we alone and none other are to be blamed for our inability to produce enough wealth to support our population on a decent standard of living and this responsibility rests on the Indian people alone. Since owing to non-economic factors, social, religious, and political, we are barred from producing as much wealth as is desirable. What we must, therefore, immediately strive and work for is that our population should lessen not by hundreds or thousands but by millions and crores.

ON THE MAXIMUM OF POPULATION

BY

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I. Introduction.

Mr. M. V. Jambunathan, writing on "The Curve of Population" in *The Journal of the Indian Mathematical Society* for February 1932, has observed that, other forces remaining constant, the relation between the population and the time measured from an initial epoch is $y = \frac{M}{1 + e^{\int f(x) dx}}$, M being the maximum, y , the population and x , the time.

Further, by expanding $\int f(x) dx$ as a polynomial $a_0 + a_1 x + a_2 x^2 + \dots + a_n x^n$, he has proved that a_n must be negative and that n must be odd. By taking special cases of the polynomial subject to the above restriction, he has given the equations

$$(i) \left(\frac{M - y_0}{y_0} \right) \left(\frac{M - y_2}{y_2} \right) = \left(\frac{M - y_1}{y_1} \right)^2 \text{ with a correction,}$$

$$(ii) \left(\frac{M - y_0}{y_0} \right) \left(\frac{M - y_2}{y_2} \right)^6 \left(\frac{M - y_4}{y_4} \right) = \left(\frac{M - y_1}{y_1} \right)^4 \left(\frac{M - y_3}{y_3} \right)^4$$

where y_0, y_1, y_2, y_3, y_4 are the values of the population at equal intervals of time. The equation can be extended to the case of any odd number, n , of observations. But since the number of observations that we are in possession of for any area is limited, I shall not go into the general case.

II. Madras Presidency.

The census reports give the following data:—

Year.	Population
1891	36,061,408
1901	38,653,558
1911	41,870,160
1921	42,794,155
1931	47,193,802

It will be immediately noticed that the decade 1911—21 does not fall into line with the others and consequently the results we get by different ways may not be the same.

(a) We shall first take 1891, 1911, 1931 and apply equation (i)

We get $\left(\frac{M-36}{36}\right)\left(\frac{M-47}{47}\right) = \left(\frac{M-42}{42}\right)^2$ reckoning in millions.

This leads to the simple equation

$$42^2(M-83) = 47 + 36(M-84)$$

which on solution gives $M=60$ (millions) approximately : (Actual 59.5 millions.)

(b) If we take 1891, 1901, 1911 we will have

$$\left(\frac{M-36}{36}\right)\left(\frac{M-42}{42}\right) = \left(\frac{M-39}{39}\right)^2$$

This leads to the equation

$$39^2(M-78) = 36 \times 42(M-78)$$

which immediately gives $M=78$.

This great difference between the two results can be immediately explained. The first method covers the epoch of the war and the consequent set-back to the growth of the popula-

tion whereas the second does not. We naturally get a bigger value by the second method.

As the purpose of this paper is to give only a rough value for the maximum, I do not go into the correction.

In the case of Madras—British Territory alone—the census of 1891 gave 35,644,428, that of 1911, 41,405,404, and that of 1931, 46,740,107. Taking the population in lakhs the equation to be satisfied by the maximum is

$$\left(\frac{M-356}{356}\right)\left(\frac{M-467}{467}\right) = \left(\frac{M-414}{414}\right)^2$$

which reduces to the equation

$$414^2(M-823) = 356 + 467(M-828).$$

Simplification gives the result $M=660$ lakhs approximately.
(Actual 661.3 lakhs.)

III. Mysore State (including C. and M. Station, Bangalore)

Year.	Population.
1891	4,943,604
1901	5,539,399
1911	5,806,193
1921	5,978,892
1931	6,557,302

Starting from the values of the population for 1891, 1911 and 1931 and taking 10,000 as the unit, the equation to be satisfied is

$$\left(\frac{M-494}{494}\right)\left(\frac{M-656}{656}\right) = \left(\frac{M-581}{581}\right)^2$$

i.e.,

$$581^2(M-1150) = 494 \times 656(M-1162)$$

which gives $M=861.6$.

Hence the maximum is about 86 lakhs.

As in this case the application of formula (ii) happens to be easy, it may be taken into consideration. Considering the population in millions, the equation for M is

$$\left(\frac{M-5}{5}\right) \left(\frac{M-6}{6}\right)^5 \left(\frac{M-7}{7}\right) = \left(\frac{M-6}{6}\right)^4 \left(\frac{M-6}{6}\right)^4$$

$$\text{i.e.,} \quad \left(\frac{M-5}{5}\right) \left(\frac{M-7}{7}\right) = \left(\frac{M-6}{6}\right)^4 \text{ as } M \neq 6$$

$$\text{i.e.,} \quad 6^4 (M-12) = 5 \times 7 (M-12)$$

i.e., we get $M=12$ as a very rough approximation.

If we exclude the C. and M. Station, Bangalore, and consider the reports of 1891, 1911 and 1931 we get the maximum from the equation

$$\left(\frac{M-48}{48}\right) \left(\frac{M-64}{64}\right) = \left(\frac{M-57}{57}\right)^4$$

$$\text{i.e.,} \quad 57^4 (M-112) = 48 \times 64 (M-114)$$

which gives $M=77.25$, the data being taken in lakhs.

A look into the tables will tell us at once that Mysore is fast approaching its maximum population according to this calculation.

Similar figures can be worked out for the whole of India and the several provinces. In the case of the former, it is likely that several uncertain factors are introduced owing to the striking heterogeneity of the population. Anyway, from the mathematical point of view, results can be got as in the other cases.

But it appears that it cannot for one moment be contended that the figures worked out are accurate except on the stipulated conditions. In practice, especially in these quickly changing times, the 'other factors' are never constant. It is certain, however, that numbers cannot go on increasing without limit and so far there have been very few attempts at determining this limit.

I thank Mr. M. V. Jambunathan for his valuable suggestions.

A CRITICAL SURVEY OF THE CREDIT COOPERATIVE MOVEMENT IN C. P.

BY

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It is needless to mention the basic principles of co-operation and the need for Co-operative Credit Societies. A study of the question of Agricultural indebtedness and of the high rate of interest that the cultivators have to pay, will convince any one that there is a great need for an organisation of this sort. The total debt of the cultivators of C. P. and Berar, has been estimated by the C. P. Banking Enquiry Committee at nearly thirty crores of rupees. This means that for every acre of land held there is a debt of Rs. 9-5-0. It comes to Rs. 227 per family of cultivators. This may not look very heavy, but we must remember that it is not every family that is indebted. The C. P. Banking Enquiry Committee have estimated that over 37 per cent of the cultivators are free from debt. As is only to be expected, even among the indebted cultivators, the debt is not uniformly distributed. Thus about 4 per cent of cultivators are hopelessly indebted and they are responsible for 37·4 per cent of the total debt and about 59 per cent are responsible for the balance.

The rate of interest charged varies in different areas. In some places it is as high as 75 per cent per annum. 37½ per cent is not an uncommon rate. 24 or 25 per cent is very common indeed. The annual interest charges payable by the rent-paying cultivators amount to about six crores of rupees, being nearly double the total land revenue demand of the province. Now no industry can prosper if it has to pay such a high rate of interest for the capital it needs. It is to remedy this that Co-operation is needed.

The success of the movement must depend on the ability of members to realise their responsibility as members accepting unlimited liability, and on their exercising mutual check in their own interest. This is principally a matter of education. With education will come that mutual check and supervision from among the members themselves, without which co-operation, in the sense in which it is understood in the West, cannot come. But Government and those non-official workers who have given their time and energy for the cause, have rightly realised that if they were to wait for this education to spread, before registering any society, they would perhaps never be able to register one. The best education is provided in the school of practice. It is necessary to adopt theories and principles to the actual circumstances of the people. The idea in this province has been, to give the people some of the benefits of Co-operation and gradually to educate them and train them to realise their responsibilities, so that mutual check and supervision may come from within. The aim of co-operation is no doubt self-help but before people are educated to be able to help themselves, they may be helped by outside agencies. This outside agency may be governmental or non-official or partly one and partly the other. If the check does not come from the body of members of each society it has to come from outside. It may be honorary non-official workers or men employed by Government for the purpose. But we must realise that from the point of view of true Co-operation, both are foreign agencies, both come from outside the body of borrowers and though they may be tolerated for some time, they must be eliminated in the end.

The question naturally arises, what should this agency be? In these Provinces this agency has been largely non-official. We must briefly take note of the progress made during the last quarter of a century and judge if we can leave the work of education and supervision in the hands of non-official honorary workers.

As has been shown in page 447 of the Agricultural Commission Report, only 2·3 per. cent of the families in rural areas have been touched by the Co-operative Credit Movement; the C. P. Banking

Enquiry Committee has estimated that less than 3 per cent of the total debts of cultivators have been secured from Co-operative Banks. From the point of view of quantity this is not much to boast of. Nor is the quality of work very satisfactory. An idea of the quality can be got from the following table :

Years.	No. of Societies in C. P. and Berar.	No. of Societies that did not take any loan from the Central Banks
1923-24	4263	2738
1924-25	4142	2453
1925-26	4071	1918
1926-27	3966	1820

These figures have been collected from the annual reports on the working of Co-operative Societies. It is apparent that a large proportion of the societies is only so in name. This view is borne out by the following passages taken from the annual reports.

“ About one-third of the total number of societies in the Central Provinces exist merely for the repayment of old debts and have practically ceased to be financed by the Co-operative Movement.” (Reports for 1923-24 and 1924-25).

In Balaghat and Hoshangabad Banks “ out of 211 and 123 societies only 10 and 15 respectively were advanced loans during the year.” (1924-25).

One of the principal objects of Co-operation is to teach thrift to members. The C. P. Banking Enquiry Committee have found that members of Co-operative Societies are more heavily indebted than non-members. Thus this object of the movement does not seem to have been achieved. In this connection I may say a few words about the practice of making a member of a society contribute Rs. 5 for every Rs. 50 borrowed towards the share capital of the bank up to a maximum of Rs. 100. It is not a sound business proposition to borrow money at 10 or 12 per cent interest and invest it in a way that it may fetch at the most 6 per cent as dividend. This has been described by its supporters as compulsory saving.

It is a curious conception of thrift and saving. We find in page 35 of the King Committee's Report reference is made to "the gradual increase of share capital by the *thrift of societies and their members enforced as it is by the compulsory purchase of shares in central banks.*" Saving can only be made out of one's income by the exercise of thrift. To teach the members to borrow more than they require in order that they may invest a part of it at a loss, is to give them a very bad lesson.

It may, however, be considered important from the point of view of Co-operation, that the borrowers should have a say in the management of Central Banks; this they can only do through the rural directors whom they send on the directorate of the central banks. This sounds quite plausible and would be quite correct if our cultivators were as wide awake as they are in Europe. But when members are not able to manage their own societies well, it is difficult to see how they can have an effective and useful voice in the management of central banks. In practice some of the bigger borrowers, have become rural directors and some of them have secured for themselves "disproportionately high loans" and frequent postponement and renewals, although, in the words of the Registrar they "are themselves defaulters of the worst type in respect of their own loan transactions with their societies."

Mr. H. H. Pande, a member of Ganoja Society, Officiating Secretary, Central Bank, Amraoti, pays an annual instalment of Rs. 300.

Principal 25	} It will take two or three generations
Interest 275		to pay off the debt.

It is not my intention to minimise the achievements of the movement but in the best interest of the movement it will be unwise to shut our eyes to the defects. The explanation of the present position can be found in the following:

(1) Formation and registration of societies without trying to explain to members what they were in for. It is said that not only did not organisers emphasise and explain the importance of joint liability but in order to induce them to form a society, the

members were told that joint liability would not be enforced. In page 514, Volume III, of the Report of the C. P. Banking Enquiry Committee we find Khan Saheb K. E. J. Sanjana, Deputy Commissioner, Bhandara, saying, " Our idea was to form societies and I myself and Rai Saheb Nuthmal formed fourteen societies in one evening in Raipur district. This was done more or less under the direction of Government." Again, " We have been weeding out bad societies and members of such societies have not derived any benefit from these societies. There were about ninety societies formed (in Bhandara) of which thirty are at present under liquidation."

No wonder, therefore, the people at first joined the movement and regarded it as " Naram Sahukari " and they became fully disillusioned when joint liability was enforced and some members suffered for the debts of other members. Thus the C. P. Banking Enquiry Committee record that at Baiji in Drug district when the cultivators were asked as to their needs, one man stood up and said, " Our cattle often die of cattle epidemics and this puts us to loss. We sometimes suffer from attacks of cholera and small-pox. Sometimes our crops fail owing to the failure of the monsoon. These are all misfortunes which come to us from heaven and they depend on the displeasure of our Great Master. These we can endure as best we can. We do not ask you gentlemen to do anything for us. You may do anything which you think good; but we pray you in your kindness, not to bring any Government irrigation canal here, nor to open any Co-operative Credit Banks. These are misfortunes which we should not be able to bear. Any other misfortune we can tolerate but this." There is no doubt that in the beginning Government officials were as much responsible for this mistake as non-official workers. As Khan Saheb Sanjana said, " in those days the idea was to spread the movement as quickly as possible." But in the King Committee's Report we find that even as late as February 1920 at a joint meeting of the managing directors of the Provincial Bank and the members of the Executive Council of the Governor of the Federation, it was

resolved that "The Governor of the Federation should request the Registrar to register new societies liberally so that the Co-operative banks, may find *adequate scope for investment of funds* in their hands and thus may have no occasion to refuse to accept deposits." It is apparent that while the Registrar had found out the mistake of forming societies as they were formed, the non-official workers were still absolutely ignorant about it. The fact that the permanent Registrar had realized his mistake is seen from the fact that before he proceeded on leave he strongly advised that consolidation and not expansion should be the policy for some time to come (page 31 of King Committee's Report). To the non-official world what seemed important was that deposits must not be refused; the banks must find scope for investment of their funds and for this purpose societies must be liberally formed. The societies instead of being an end were a means.

(2) Failure to realise that societies are the real centres of co-operation and central banks are but financing agencies. In the Appendix to the Report of the Royal Commission on Agriculture, containing prefaces to the provincial volumes of evidence (pp. 214 and 215) we find the following significant view in support of this contention: "The Central Banks gathered to themselves too much power and the village societies declined to the state of mere agencies, lacking that vigorous individuality which is born of responsibility."

"Unfortunately, however, the financial prosperity of the provincial and central banks had distracted attention for too long from the internal workings of the village societies. Amongst these latter, sufficient teaching in the principles and objects of co-operation had not been given to members; the principle that the whole movement exists for the benefit of members of the primary societies was not that dominating factor in central bank policy which it ought to have been."

(3) The failure to recognize that as mutual check and supervision from among members of the societies were not forthcoming the success of the movement must depend on these being supplied

from outside. The fixation of credit limit was entrusted to society *moharrirs*—a class of low paid employees who neither had the necessary ability to do it properly nor could they be expected to possess the necessary character to resist the temptation of fixing the limit high for a consideration. This duty has now been entrusted to group officers about whom the Registrar of Co-operative Societies said in his Report for 1927-28, “No pains have been spared to train them to discharge their duties properly, but the low educational qualifications of some of them have proved a serious obstacle, which can only be removed by the recruitment of a better type of person.” The Registrar also complained of too many societies being put under one group officer—too many for him to be able to discharge his duties properly.

(4) Laxity in the matter of recovery has helped to accumulate debts beyond the paying capacity of the borrower. That central banks have not always been strict in recovery is admitted on all hands. This will be apparent from the following figures for renewals and overdues collected from the annual reports on the working of the Co-operative Societies.

Years.	Total arrears, (renewals and overdues).	Total working capital.
1922-23	Rs. 63,59,962	Rs. 1,27,62,195
1923-24	„ 55,58,740	„ 1,21,13,118
1924-25	„ 49,70,805	„ 1,35,39,518
1925-26	„ 66,69,167	„ 1,55,90,729
1926-27	„ 63,68,854	„ 1,58,71,045
1927-28	„ 75,64,148	„ 1,62,09,459
1928-29	„ 53,26,383	„ 1,62,46,777

Laxity in recovery is only apparent kindness but it is just the reverse in fact; as the debt accumulates beyond the paying capacity of the borrowers and ruins the members of the society in

the end. This laxity is to some extent at least due to the fact that central banks are sure of ultimate recovery, for, the loans are secured by the joint and several unlimited liability of members. Thus unlimited liability of members, which, in the absence of proper education, has failed to bring forth mutual check and supervision by members, has reduced the risk of central banks and led to carelessness in fixation of credit limit and slackness in recovery on the part of these banks. In the annual report on the working of Co-operative Societies for 1926-27 we read, "The financial policy of the Berar banks requires revision. Hitherto, they have been advancing loans to societies more on the basis of their assets than their annual income." Again, "Some of the Banks in Berar exhibit laxity in recoveries. This is due partly to the feeling *that owing to the transferable rights enjoyed by ryots in Berar, the advances are safe* and partly to the failure to realise that punctuality in repayment is the basic tenet of Co-operation." This shows that ultimately the debts can only be recovered by selling up the members. This is the method of moneylenders and should be repulsive to all co-operators, though this may be good business for central banks. It should be the business of the movement to see that such a contingency may never arise. But this is what is happening in some parts of Berar and thousands of acres of land are coming into the hands of Central Banks.

In this connection I may cite the case of Karanja Ramjanpur (Akola). In Volume II, pages 80 and 81 of the C. P. Banking Enquiry Committee's Report we read, "In considering debts we must make mention of the difficulty in which the Co-operative Central Bank at Akola has been landed by financing some people of this village. A Co-operative Society was started in this village in 1918 with eleven members. In course of time the membership rose to twenty-two. It is now sixteen. The landed estate owned by the present members in this village is 920 acres assessed at Rs. 2,128 and *in the boom years no attempt at recovery was made. Prices fell with the result that on June 30, 1928, the debt had*

increased to Rs. 78,000. The Central Bank has taken over the land and is cultivating it and will do so until the whole debt is paid off. The Report says, "The borrowers expect to get back their land at the end of fifteen to twenty years. But whether the profits of the land will be such as to satisfy this debt with 6000 annual interest within that time, is very doubtful."

(5) The failure to recognise that a proper sense of responsibility can only develop in members of societies and mutual check and supervision can only be forthcoming from them, if societies are formed with members of more or less the same economic and intellectual status. Human nature is what it is and we must expect that the strong will always try to take advantage of the weak. This has taken two forms, viz.—(i) in some cases the richer members have borrowed money from their society at 12 per cent and lent it out at a higher rate. In page 6 of the Report of the Indian Central Cotton Committee on 'Finance and Marketing of Cotton in Berar' we find an instance, "It is noteworthy that during the village enquiries at Gaigaon, a village in Akola section, it was found out that certain landowners had been borrowing considerable sums from Co-operative Credit Societies at 12 per cent and at the same time were advancing varying amounts to small cultivators at 24 per cent. That such action is possible denotes a want of safeguards by the Co-operative Credit Societies in their financing transactions." (ii) The big members have taken too large a proportion of total loans and have generally been able to secure postponements of recovery and renewals. It is not without justification, therefore, that it is said that many of the Co-operative Credit Societies of Berar consist of one spider and nine flies. The flies have not been able to check the spider. The result is that in Berar a large proportion of debts is concentrated in a few big borrowers. Thus we find in the annual report for 1924-25: "In many banks in Berar, a few members of Societies owe a large portion of total loans, e.g., in one bank, out of Rs. 4,43,043 advanced to 828 members of societies, no less than Rs. 2,23,028 were loaned out to 12 members." That is more than 50 per cent

of the loans were advanced to less than 2 per cent of the borrowers. In the Report for 1925-26 we find, "In Hoshangabad and Piparia also large loans have been absorbed by prominent individual members, some of whom are influential directors of the Bank." In the Report for 1927-28 the Registrar writes, "The concentration of loans in the hands of a few members is a very unsatisfactory feature in Berar and about 22 per cent of members owe about sixty-five lakhs of rupees, the remaining owing twenty-four lakhs." The Registrar concludes that "the constitution of societies in Berar appears to be fundamentally unsound in that the majority of them consist of a few big members and a large number of small cultivators.

(6) Sufficient attention has not been paid to education of members of societies in Co-operative principles. The Committee of the Federation Congress of February 1925, pointed out that the vital matter of education and supervision of societies had been much neglected in the past and the "failure to educate members of societies in the salient principles and practice of Co-operation, is, in our opinion, a factor which has contributed greatly to the present deteriorated condition of the movement." The Committee recognised that the directors of Central banks were busy professional men and could not spare the time for this work. Central banks should be a purely financing agency and the task of supervision and education should be entrusted to an independent agency. The Committee endorsed the Registrar's scheme of relieving Government auditors of the duty of auditing primary societies and releasing them for the duties of reorganization and education. The Registrar observed in his annual report for 1927-28 that "The Education Committee in Berar . . . have not much work to their credit except the holding of rallies. The members of the Committee did not visit the societies in their charge except in the Amraoti bank."

The Report of the Committee appointed by the C. P. and Berar Co-operative Federation Congress, 1928, for drawing up a detailed scheme for the better education and supervision of primary

Co-operative Societies, suffers from the fact that it starts with the supposition that non-official control must continue and therefore a large part of the additional expense must be forthcoming from the movement itself, the Government being asked to make a small contribution. This in spite of the fact that the tenth Conference of Registrars after considering the recommendations of the Royal Commission on Agriculture, resolved that wherever necessary Government should make substantial contributions towards the cost of education and supervision. The committee, of course, realised that Government could not be expected to contribute large sums without getting a really effective control of the movement. The Committee recognised that the honorary workers have not much time to go to villages and test the field work of the staff," yet they recommended that "the staff of group officers will work under the *immediate supervision* of the Local Committee." The Local Committee would consist of six members of whom all but one, viz., the Government circle auditor would be honorary workers. This is indeed a surprising remedy after the Committee's recognition of the fact that the honorary workers have not much time to go to villages and test the field work of the staff." The Committee, however, opined that "The Local Committee will no doubt take full advantage of the services of the Circle Auditor" for education and supervision. If it is intended that the Government Circle Auditors should undertake these duties, that fact should be plainly stated, so that the number of such men as would be required to do the work properly might be estimated.

(7) Too much has been expected from honorary workers. They are men who have to earn their own living and look after their own business. They cannot spare the time necessary to perform the tasks of supervision and education without which the movement cannot possibly succeed. The Royal Commission on Agriculture in India rightly said, "To the failure to recognise the limitations inherent in the system of utilising honorary workers must be largely attributed the very serious defects in the movement, which have been brought to our notice. Again, "it must be recognised

that honorary workers cannot be expected to exercise that regular supervision which is essential to the success of the movement." (P. 451.)

Even if we neglect for the time being the fact that honorary workers cannot afford the time, we are faced with another difficulty, that is, the dearth of honorary workers. Nor is there anything to wonder at that. The struggle for existence is becoming harder every day and members of the legal profession and others will find it more and more difficult to spare time to carry on the work as it should be carried on. Is it desirable that a movement that has been described as the best hope of rural India should depend on the uncertain supply of honorary workers and their spasmodic efforts? Already the want of honorary workers is being felt and we read in the King Committee's Report, "Unfortunately we notice that the present workers are almost confined to the pioneers who started the banks and they themselves state that they are unable to recruit new workers and that they do not see where their immediate successors in office will be found" (p. 29). And in the report on the working of the Co-operative Societies in C. P. and Berar for 1927-28, the Registrar complains that

"The number of societies (affiliated to the Pusad Central Bank) has not risen, as the bank is not in a position to maintain any staff and honorary workers are not forthcoming." Again, "The Sehora Central Bank suffers from a lack of honorary workers and the staff in that bank stands in need of far greater supervision than has been forthcoming."

In some places the movement suffers on account of differences among Brahmin and non-Brahmin honorary workers. Co-operation "the best hope of rural India" cannot be allowed to become the battlefield of Brahmins and Non-Brahmins.

Some honorary workers are often guided by a false sense of kindness in dealing with their dishonest employees. Even when the charge is proved to the hilt, they are unwilling to prosecute them and are content with a mere dismissal. This cannot make

for efficiency and purity of service especially when such people have to deal with poor ignorant villagers.

Running the movement with honorary workers has another defect. Mistakes by honorary workers must of necessity be looked at with indulgence and condoned. The crisis of 1920 is an example. There is one argument in favour of honorary work, an argument which is likely to carry weight at this moment, viz., that it is cheap. But cheapness cannot be judged only by a consideration of the sum of money spent. We must consider this in relation to the result obtained. If the desired result has not been achieved, the agency cannot be called economical. I do not think anybody will suggest that the desired result has been obtained or is in sight.

One must, therefore, agree with the recommendation of the Royal Commission on Agriculture in India "that every effort should be made to build up a highly educated and well-trained staff in all provinces. "Its chief duty is to educate members up to the point at which they will be competent themselves to undertake its duties and so to dispense with its services." Again, "Our recommendation in favour of an expert staff to educate the people in Co-operative principles is already in force in one province and has been accepted in another, whilst the evidence from three more at least showed that the need for such a staff was keenly appreciated."

The question now arises who should employ and control the staff. To get the right type of men, to do the work well, it will be necessary to pay them adequately, select them wisely and give them an assurance of continued employment in case they perform their duties honestly and efficiently. Employment by Government is likely to satisfy these conditions better than that by any private or semi-public body. There should be a whole-time Registrar, who need not be a member of any particular service. Anybody may be appointed who can do the work. Having got the right man, it should be made worth his while to stay on. An I.C.S. Registrar is undesirable from this point of view. He cannot be expected to

sacrifice his career and prospects for the movement. Frequent changes of Registrars cannot make for efficient running of the department.

Organisation of Co-operative services under Government on a much larger scale than is at present the case, as has been done in the Punjab and recommended by the Royal Commission on Agriculture, must, of course, involve Government in additional expenditure. This is hardly the time to press for it. But the present depression is only a passing phase and in the meantime let us fully realise that Co-operation is the best hope of rural India, that at present it is not what it should be and that honorary work cannot lead us to the promised land. We must not forget that the major part of the wealth of the province is produced in rural areas and that agriculture is the greatest industry of the province. High rate of interest is a stumbling block in the way of agricultural improvements and progress. The cultivator is paying for the running of the machine of Government and Government in its turn must help the cultivator to improve his economic position.

THE PRESENT POSITION OF RURAL CREDIT AND COOPERATION IN THE UNITED PROVINCES

BY

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Introductory.

It is a matter for gratification that Indian rural problems are at last getting the attention they deserve. That India is essentially rural is not denied by any one. The problems of rural backwardness, rural indebtedness and educational poverty have got to be faced and overcome. The first one cannot be said to be the result of any one factor only. It is a complex problem and covers the latter ones as well. The most important contributory cause is the curse of perpetual indebtedness. India's salvation lies in her rural community. But, where do we find a rural community? Rural population exists but that is altogether a different thing. The word "community" implies an association of people having common interests and common possessions, bound together by laws and regulations which express these common interests and ideals and define the relation of the individual to the community. Our rural population is no more closely connected, for the most part, than the shifting sands on the seashore.

Self-help through mutual-help.

The peasant leads an almost entirely individualistic life. Everybody pursues his own occupation without regard to the occupation of his neighbours. They are heavily indebted and completely in the clutches of the moneylender. The debt is passed on from father to son with scarcely any hope of redeeming it. This crushing burden embitters the life of successive generations.

It is no wonder that the *ryot* resigns himself to his *kismet* and adopts no effective measures to improve upon this state of affairs.

It was with an idea of remedying these evils that organised efforts were started in this country towards the latter part of the last century. Sir William Wedderburn's scheme to establish Land Banks having been turned down by the Secretary of State for India, everyone looked to Co-operation to usher in an era of prosperity. The world's experience had proved that the principles of the movement could be universally applied. In India, the honour goes to the Madras Presidency of having taken an official lead in the cooperative field. The exhaustive enquiry of Sir Frederick Nicholson and his report mark a distinct step in the economic history of this country. At the same time another pioneer was also carrying out his researches in the same field. Mr. Dupernex, a Civilian of the U.P., had conducted an enquiry at the instance of his government. The book, the *People's Banks for Northern India*, embodying the results of his labours attracted a great deal of attention. We have it on the authority of the late Mr. Panchanandas Mukherjee that "from this time onwards Mr. Henry Wolff, the recognised Cooperative leader in Great Britain, began to evince the keenest interest in the development of the cooperative movement in India." Again, "The government and government officials continued to take greater interest in the movement. In the Hindu caste system, in the Moslem sentiment of common brotherhood and 'one for all,' in the *Panchayat* system and particularly in the *Nidhis* of Southern India, they found ample evidence of the people's natural aptitude for cooperation." For a number of years good fortune seemed to smile on the scheme. Acts of legislature, committees of enquiries and government resolutions followed each other in pretty quick succession. The progress, too, was gratifying. Better business, better farming and better living served as the motto. But, after some time, the efforts seemed to slacken and enthusiasm died down. Recently, the success has not been encouraging enough. The earlier missionary spirit is lacking and it is time to take stock of the

present position and concentrate all the capital and all the effort we can command on the development of the movement. Self-help is to be the watchword, but if self-help is to be effective it must be unselfish. It must be self-help through mutual help.

The present position of rural credit.

The present position of rural credit in the United Provinces—I am not treating it from the all-India standpoint, that being too wide a field—is very deplorable. Moneylenders still exploit the peasants to the utmost, generally charging very high rates of interest, in spite of the Usurious Loans Act, which, the Agricultural Commission has stated, is “a dead letter in every province.” “Usury is nothing new and is not peculiar to India. It has existed in all the nations and at all times. It has always been denounced but never annihilated.” Credit is very necessary for all kinds of undertakings. It is as necessary for agriculture as for business, and, hence debt is unavoidable. There is no ground for complaint so long as the agricultural debt is productive and the rates are not usurious. When these conditions fail to be satisfied, it is time to set things right.

Money is provided to the villagers by (a) Mahajans, (b) Banias and persons of smaller means, belonging to other professions, even sometimes including tenants, who having money to spare and finding the business very lucrative, start money-lending, (c) Zamindars, and (d) the peripatetic moneylenders, e.g., Rastogis; and Pathans from the Frontier Province, wrongly called Kabulis, etc. (a) and (b) The Mahajan, nearly without exception, is a trader as well. He is by far the most important moneylender in the rural areas, employing quite large amounts of money in the lending business. The position of the mahajans and banias, etc., is more or less the same. They charge high and more often than not usurious rates of interest. Being traders themselves, they generally exercise a first lien on the produce of the debtor. The best quality is taken away by them at the price of second and even third-class produce. Moreover, they expect from the *ryot* so many

things free of charge every season—presents and gifts. Sometimes, the creditors ask the peasants to put in *begaar* (forced labour) for them. In case of refusal to comply with any of the above-mentioned requests, the threat to ask for the repayment of the principal together with the accumulated interest is always hanging like Damocle's sword over the head of the unfortunate debtors. And, the only alternative to the default in repayment is summons to the civil court, which in itself is enough to scare a villager out of his wits. (c) To a certain extent, zamindars also start lending money. Such creditors are most powerful, and all the more so if they combine the functions of a businessman as well. (d) The fourth class of creditors is not very common. They go round the villages from season to season advancing loans or selling cloth on credit, and charging usurious rates of interest. The threat of the Rastogi in case of default is summons and ultimately distress warrant and even debtors' prison; while that of the Pathan is force and coercion through his *danda* (cudgel). The public opinion in general and the village opinion in particular do not affect these creditors. They do not care for anything except their money. Fortunately, the number of such moneylenders is not large.

Total agricultural indebtedness in the U.P. .

The U.P. Banking Enquiry Committee have calculated the total Agricultural indebtedness of the province in the following manner:

<i>Description of debt and area</i>	<i>Estimated debt in Rs.</i>
1. Tenants and peasant proprietors, Dehra Dun	29,33,000
2. Kumaun Division, hill tracts	42,33,000
3. Kumaun Division, Tarai and Bhabhar ...	42,78,000
Total, Himalaya, West ...	1,14,44,000

<i>Description of debt and area</i>		<i>Estimated debt in Rs.</i>
4. Sub-Himalaya, West	...	1,57,80,000
5. Indo-Gangetic Plain, West	...	11,23,75,000
6. Indo-Gangetic Plain, Central	...	5,11,91,000
7. Central India Plateau	...	1,77,09,000
8. East Satpuras	...	37,83,000
9. Sub-Himalaya, East	...	2,71,58,000
10. Indo-Gangetic Plain, East	...	7,15,54,000
Total, Tenants and peasant proprietors		31,09,94,000
11. Landlords (excluding mortgage debts)	...	19,20,60,000
12. Mortgage Debt	...	70,00,00,000
Grand Total Rs.		1,20,30,54,000

To this sum, however, they add a figure amounting to Rs. 3,51,54,000 on account of (i) the indebtedness of farm servants and field labourers, (ii) a considerable amount of unregistered usufructuary mortgages both of the ordinary type and of the type of sub-leases; and (iii) possible understatement of debt. The total thus amounting to Rs. 1,23,82,08,000 has been rounded off to 124 crores. Excluding the mortgage-debt, the debt amounts to 54 crores. Of this, some 20 per cent—eleven crores—represents advances in kind; the balance of forty-three crores is in cash. On the basis of the observed distribution between the various classes of money-lenders, a sum of Rs. 3.94 lakhs is the amount of debt outstanding to the credit of government and the cooperative credit societies. This leaves a sum of Rs. 39,06,00,000, which has been advanced

by the professional moneylenders, landlords and tenants, divisible between them as follows :

				Rs.
Professional moneylenders	...	...	...	15,62,00,000
Tenants	...	...	...	17,36,00,000
Landlords	...	...	...	6,08,00,000

The amount of credit required, therefore, to finance agricultural debt, apart from advances in kind and advances made by government and cooperative credit societies is just over thirty-nine crores.

Different schemes.

None of the indigenous agencies for dealing out credit in the rural areas proving satisfactory, some schemes for improvement have been put into practice. It must be pointed out at the very outset that the desirable scheme ought to fulfil certain conditions: (i) The loan must be easily available and should be cheap. (ii) At the same time, it must be hedged in by certain safeguards. Mere cheapness should not be the aim. What is wanted is reasonable credit from reasonable creditors. It must be controlled credit. Mr. Darling says, "As a servant credit can turn sand into gold but as a master it will turn gold into sand." (iii) Along with lending, the cultivator must also be educated in self-help and providence. (iv) Not only indebtedness, but the causes of indebtedness should also be tackled with.

Different schemes have been tried by the government but they were found lacking in the above attributes. Taqavi loans advanced under the Land Improvement Loans Act of 1883 and the Agriculturists Loans Act of 1884 have not been able to reduce indebtedness. An act of legislature, to stop the mortgaging of land and its subsequent transfer to the mahajan, on the lines of the Punjab Alienation of Land Act of 1910 is at present under the consideration of the U. P. Government and the Legislative Council. The Usurious Loans Act of 1918 already exists. These and other sundry activities can only supplement and not supplant some more

comprehensive scheme. Agricultural Banks of the Egyptian type were suggested some years back by Sir Dinshaw Wacha, but, on account of peculiar conditions obtaining in India, that model was not expected to succeed. Side by side with these activities, it was decided to try Cooperation, which alone could provide a comprehensive scheme covering all the possible aspects of rural indebtedness. "Cooperation is a two-edged axe which strikes at the same time at the dead abstractions of the socialistic state and at the sterility of individualism—that corrosion of energy, that dispersion of collective force in individual frailties," says Romain Rolland.

The movement has been working in the United Provinces for the last thirty years—the first official figures available being for 1904-05. Still we find that the mahajan is not afraid of it. On the other hand, he has reached the conclusion that cooperation cannot be universally applied and that even the majority of the peasants cannot be financed by the credit societies. Usurious rates of interest are as common as they ever were. Out of 124 crores, the total agricultural indebtedness in the province, or fifty-four crores, excluding the mortgage-debt of seventy crores, a sum of about four crores is the amount of debt outstanding to the credit of government and the cooperative credit societies. This is a sad commentary on the cooperative activities. But, the movement has been more sinned against than it has sinned. From its very inception, such large hopes have been built on it that the immensity of the task it has been set to has been completely lost sight of. It was certainly unfair to expect the indebtedness of generations to be wiped off in one year. After some time the public opinion came to believe that it was no doubt doing some good though the benefit was falling short of the general expectations. But, now it seems that it has not yet even touched the fringe of the problem. Moreover, when 54 per cent among tenants and peasant proprietors are said to be indebted, and when only 30 per cent of agricultural debt is productive, the rest being either unavoidable or directly unproductive, the problem cannot brook any delay.

Progress of the Movement.

The following figures from the U. P. Census Report, 1931, are interesting as well as instructive. They refer to British territory only.

Date of Census.	Population.	Inter-censal Percentage of Variation.	Density.
1921	45,874,989	+6.7	427
1931	48,408,768		458

The fact should not be forgotten that over 76 per cent of the population depends on agriculture for a living.

The following table shows the progress of the cooperative movement in the United Provinces of Agra and Oudh.

Year.	Total No. of Societies.	Total No. of Membership of Primary Societies.	Total working Capital of Societies.	Total owned Capital of Societies.
			Rs.	Rs.
1904-05	159	12,215	62,094	
1910-11	1,258	68,085	49,60,229	7,68,189
1920-21	4,493	1,10,630	1,29,51,561	46,04,540
1930-31 1*	5,010	1,18,441	1,04,55,867	50,50,316
2	250	5,117	11,208	4,286
3	291	28,178	25,47,405	18,00,048
1931-32 1*	5,046	1,08,274	1,01,85,049	52,85,107
2	872	8,302	29,160	7,597
3	301	29,982	29,86,337	14,95,425

The figures show that the progress has not been appreciable and there is much room for expansion. It has to be pointed out here that during the last six or seven years, the finances of the province have been far from enviable on account of scarcity and drought, excessive rains and floods, or the world low prices.

* 1. Agricultural Credit, 2. Agricultural non-Credit, 3. Non-agricultural.

Defects in the Movement.

A number of defects exist in the cooperative movement which have been responsible for the chaos and the comparatively poor success.

- (1) *Organisation and Supervision.*—The work of organisation and supervision is not performed in the right spirit. There is inadequate supervision and defective cooperative education. This has led to corruption and embezzlement in many cases, ending in liquidation proceedings being started against some of the societies. Many instances have been found where pressure has been brought to bear upon the peasants by the honorary organisers to become members of an existing society or to form a new one. A title sometimes or favour with the district authorities has generally been the only consideration. The paid organisers and supervisors have either been too slow and shown lack of interest, or in their zeal have committed the same mistake as the honorary workers. It is a matter for gratification that, subsequent to the recommendation of the U. P. Cooperative Committee, 1925, proper training is being given to them now. The U. P. Cooperative Union under which their services have been placed is exercising strict control and vigilance.
- (2) *Members and Panches.*—The members and *panchayats* are culpable to a very great extent. For too little attention is paid to the careful selection of honest members. The former do not know what is expected from them. Nearly 95 per cent of them are ignorant of the three R's. But illiteracy can be merely an obstacle and not a cause of failure. They never care to pay back the loans punctually, though they are honest all right. Elementary principles of cooperation are not practised. If the loan is misspent nobody

cares. Thrift is not appreciated as is evident from the poor and few deposits. In the agricultural primary credit societies, the outstandings towards the close of the year 1931-32 amounted to Rs. 78.39 lakhs, out of which no less than Rs. 55.48 lakhs were in arrears. The overdues inclusive of postponements amounted very nearly to Rs. fifty-eight lakhs. The *panches*, too, are generally illiterate persons. But they are very well up in partisan spirit and nepotism. Many a time it has been noticed that they come to a mutual understanding to the effect that loans should be sanctioned for their own partisans only, leaving the rest of the members uncared and unprovided for. Moreover, general apathy towards the working of the societies, owing to their lack of education and an absence of higher ideals, is common to all members and *panches* alike. Very often the *sarpanch* (Chairman) or the Secretary even, becomes supreme and assumes dictatorial powers. As a matter of fact, the latter should have no voice in the management. It is a hopeful sign that group secretaries are fast being replaced by member secretaries. Then, there is the objectionable practice of making book-adjustments and taking *benami* loans.

- (3) *Delay in Advancing Loans*.—"One cause of the unpopularity of cooperative credit societies undoubtedly is the inordinate delay that takes place in the advancing of loans, the result of many formalities," says the U. P. Banking Enquiry Committee. Members have to wait for weeks before they can get funds for agricultural operations, and, as such operations must be proceeded with, resort to the moneylender is not uncommon. Further, as this delay on their part is mostly due to their inability to get funds from the Central Banks, the evil custom of making exaggerated

demands for loans has grown among the cooperative societies.

- (4) *Land Mortgage Banks.*—The complete absence of Land Mortgage Banks in the province, with the solitary exception of one society in the Ghazipur district registered at the end of 1929-30, reveals yet another defect in the cooperative structure. Not finding any cooperative agency for lending on the mortgage of land, needy persons cannot help going to non-cooperative lenders. Long-term loans are essential for permanent improvements in and additions to the existing holdings. And, the case for Land Mortgage Societies becomes all the more important as the primary societies do not advance for long terms.
- (5) *Provincial Cooperative Banks.*—On account of persistent pressure from prominent cooperators and Cooperative Conferences, it was hoped that the United Provinces also would have an Apex Bank in the near future. But, the Oakden Cooperative Committee decided against it. Again the whole issue was raised in connection with the enquiries of the U. P. Banking Enquiry Committee which voted in favour of a Provincial Bank and prepared a tentative scheme for the same. The U. P. is the only province in India, excepting the Frontier Province, of course, without such a Bank.
- (6) *Government Responsibility.*—The government cannot escape their share of blame. When the movement was started and the Cooperative Credit Societies Act of 1904 passed, they studiously avoided identifying themselves openly with it, and maintained a non-committal attitude with the result that the progress was not as fast and satisfactory as could be expected. The Act of 1912 saw the government taking courage and blessing the movement officially. The privileges

granted under the first Act were enlarged and increased. We find that in the Resolution No. 12-287-1, dated Simla, the 17th June, 1914, the Government of India laid down, that "... as cooperative societies are no longer isolated experiments outside the sphere of district work, and as, beyond the material benefits which they offer, they represent an influence closely connected with the welfare of the people and powerful now and in the future, for good or evil, the district officer cannot dissociate himself from the movement." Since then the officials have been sympathising with the movement, but on account of poor financial aid given to the Department of Cooperative Societies, lot of useful work remains undone. The movement is handicapped by insufficient government support and inadequacy and insufficiency of staff. The Registrar U. P., in his Annual Report for 1930-31, says, "There is a tendency in some quarters to say that too much money is being spent by government on the cooperative movement. I may, however, point out that if in the early stages adequate help and assistance had been given in the shape of a suitable staff, the movement would not have been in the deplorable condition found by the Oakden Committee. The staff is already overworked and to cut it down would only mean to repeat the mistake of the past years. We are passing through such difficult times that the movement needs more and not less help than before." An era of expansion had followed the recommendations of the Oakden Committee. The staff was increased all round, though even then, the Cooperative department in the United Provinces was the weakest of all similar departments in the other major provinces in this country. Since last year, the Registrarship has been

combined with the Directorship of Industries as an economy measure. On the same ground, one Deputy Registrarship, out of the two, is being held in abeyance. There are seven Assistant Registrars for nine revenue divisions in the province. These figures speak for themselves. The subordinate staff also is employed on the same niggardly basis as the superior and gazetted officers.

Further, the privileges granted under the two Cooperative Acts are proving insufficient. The Cooperative Committee (U. P.) of 1925 and U. P. Banking Enquiry Committee recommended the conferring of some more. It is time those recommendations were given effect to by the provincial government. And lastly, there is not full cooperation between the cooperative department and landholders, and between that and other government departments, like, Education, Industries, Agriculture and Public Health, and the District Boards too.

(7) *Public Apathy*.—Be the attitude of the government what it may, the public cannot be absolved of their responsibility in the matter. In all the countries of the West, non-official efforts have mainly contributed to the success of the movement. Here we find that no one comes forward to help the movement in right earnest. Donations are never heard of. Honorary workers are not attracted in numbers in this land. Even those who try to assist the cooperative institutions are generally too busy with other work to devote any considerable time to them.

The future of the movement will depend on the extent to which these defects are remedied. It might not be out of place to say that a new system of government, and a new machinery of economic

control have come into prominence on all sides. Of many things we cannot prophesy, but one thing at least is quite certain that in the coming race for prosperity, a country which does not help itself forward by its own vigorous efforts will fall far behind. Indians, therefore, have an urgent duty to themselves and to their country in making serious efforts to tackle the problem of rural indebtedness in India.

SOME ASPECTS OF THE POST-DIWANI LAND REVENUE SYSTEM IN BENGAL AND BIHAR

BY

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I

The object of this paper is to describe the land revenue system as it obtained in Bengal¹ and Bihar mainly between the acquisition of the Diwani by the East India Company in 1765 and the appointment by the Company, in 1769, of Supervisors 'with powers of superintending the native officers employed in collecting the revenue or administering justice, in different parts of the country.'² The paper is practically based upon the contemporary Proceedings of the Bengal Select Committee and the Fourth Report (published in 1773) of the Committee of Secrecy 'appointed by the House of Commons in the Sixth Session of the Thirteenth Parliament of Great Britain, to enquire into the state of the East India Company.'

¹ Excluding what are known as the Zemindary lands of Calcutta and the twenty-four Parganas, and the ceded districts of Burdwan, Midnapore and Chittagong.

² The Fifth Report, Bengal Presidency, 1812.

II

The sources of the revenue of the Company after the grant³ of the Diwani were⁴—

1. ' Rents of lands,
2. Duties and Customs,
3. Farms of exclusive privileges, and
4. Fines and forfeitures.'

Rents derived from lands constituted in those days the principal source of revenue. Duties or customs, however, were levied upon almost every " article of life." They were collected either at *chokies* or custom-houses, or at the *Ganges* or markets. Following the usual custom, the Company, as the Diwan, could, and actually did from time to time, make such alterations in those duties or customs, as it thought proper.

' Farms of exclusive privileges ' were ' farms of privileges of exclusive trade.' As a source of revenue such farms had existed before the grant of the Diwani to the Company. This was a minor source of revenue.

Lastly, ' fines and forfeitures ' constituted another minor source of revenue. They were inflicted on offenders for " breaches of the law, criminal, civil or religious," of the country.

III

I propose to deal in this paper with the question of revenues derived from lands only. All the lands in Bengal and Bihar were

³ It may be noted here incidentally that the royal *Farman*, dated the 12th of August, 1765, which conferred in perpetuity on the Company the Diwani authority over the provinces of Bengal, Bihar and Orissa, contained among other things the following clause :

" As the said Company are obliged to keep up a large army for the protection of the provinces of Bengal, etc., we have granted to them whatsoever may remain out of the Revenues of the said provinces, after remitting the sum of 26 lacs (*sic*) of rupees to the Royal Sircar and providing for the expenses of the Nizamut."

⁴ The Fourth Report of the Committee of Secrecy, 1773.

considered as belonging to the Crown or Sovereign of the country, who claimed, subject to what follows, a right to collect rents or revenues from all of them. But no such claim could be made in respect of any lands which were appropriated to charitable and religious purposes. Having been granted by different princes, they were understood by the general tenor of such grants to be exempted from the payment of any rent to the Sovereign.

There were, besides, other lands, 'held by grants of different kinds,' which paid 'only a fixed annual acknowledgment or rent' which was generally much below the medium rate of rents in the provinces of Bengal and Bihar. These lands were called *Jaghires* or *Talooks* according as they were 'grants from the Crown to individuals' or 'grants from the Nabob or Prince to individuals.' According to Mr. Verelst, who was Governor and President of Bengal from after the departure of Lord Clive in January, 1767, till December, 1769, these *Jaghires* and *Talooks* differed in the nature of their tenure: the *Jaghires* were sometimes granted for life only and sometimes for the life of other persons in the same family; but the *Talooks* did 'more regularly descend to the heirs of the first grantees, than the *jaghires*.'

Moreover, the Rajas and Zemindars of the time had "certain lands, perquisites and allowances" which they used to 'hold by virtue of their offices for their support.'

The rents in respect of all lands excluding those held by grants in the aforesaid manner, were paid in such proportion as would be settled annually by the Diwan with several Zemindars, farmers, or collectors who would hold the lands.

IV

I shall now describe⁵ the manner in which revenues derived from lands were actually collected.

⁵ This description applies to other sources of revenue as well. (*Vide* the *Fourth Report of the Committee of Secrecy*, 1773.)

The Diwan used to collect the revenues by farming them out, either to the Rajas or Zemindars who were considered as having had a sort of hereditary right, or at least a right of preference to the lease of the revenues of the province or district to which they respectively belonged—or ‘to other farmers under the name⁶ of *Izodars* and other appellations’—or to officers appointed by Government under the names⁷ of *Fouzdars*, *Aumils* and *Tussildars*, with all of whom the Government would enter, generally, into *annual* engagements for the revenues of the several districts. If a Raja or Zemindar proved a defaulter, he would be dismissed and lose his lands. Thus the Company once took into its own hands the collection of the revenues of the district of Nuddea (Nadia) when its Raja ‘fell in arrear of rent.’ An allowance, however, was granted by the Company to the said Raja.

An annual rent-roll of the provinces of Bengal and Bihar, called the *Bundibust*,⁸ was renewed and settled every year at a festival, called the *Poonya*,⁹ which was usually held in the month of May for Bengal, and in the month of September for Bihar. In settling the rent-roll, the Government would first endeavour to treat, for the revenues of each province or district, where there was a Raja or Zemindar, with such Raja or Zemindar; if, however, the Raja or Zemindar did not come to an agreement with the Government, an officer would be appointed to superintend the

⁶ *Izodars*—Probably *Izerdars* (farmers).

Fouzdar—The chief magistrate of a large district; sometimes employed as Receiver-General of Revenues.

Aumil—“Agent, officer, or native collector of revenue.”

Tussildar—The officer in charge of a *tahsil*. His duties were both executive and magisterial. Also Indian Collector of Revenue.

⁷ *Ibid.*

⁸ *Bundibust*—“A settlement of the amount of revenue to be paid or collected.”

⁹ *Poonya*—From *Punyâha* (holy day) “The day when the settlement for the new year is made.”

collections of the province or the district. The officer would have the collections made in the name of the Raja or Zemindar and his own, all public orders being issued in their joint names. But in districts, where there was no Raja or Zemindar, an endeavour would be made to treat with the existing farmer; and if such farmer failed to come to an agreement with the Government the lands and revenues he had held would be let out to some other person for the best rent that could be procured in the circumstances. Failing this, the Government would take such lands in its own hands for management.

After the general rent-roll had been thus settled between the Government and the several Rajas, Zemindars, Farmers, and others under different names, these again would enter into 'agreements with those of lesser degree, either with the ancient occupiers or tenants, called Ryots, or with new tenants.' And, according to Mr. Verelst, under an ancient rule of the Government, agreements once made with Ryots for lands which they and their families held, would be considered as sacred, and the Ryots were not to be deprived of their possessions as long as they conformed to the terms of their original contracts. This rule, however, was not always duly observed.

The theoretical arrangement for the collection of land revenues as described above, did not always work very satisfactorily in actual practice, so far as the interests of the Ryots were concerned. This will be evident from the following extract from a letter¹⁰ written by Mr. Richard Becher, Resident at the Durbar, to Mr. Verelst, Governor and President at Fort William, on May 24, 1769:

“When the English first received the grant of the Dewannee their first consideration seems to have been the

¹⁰ Bengal Select Committee Proceedings, 8th July, 1769; also Firminger, Introduction, Fifth Report, Vol. I, pp. clxxvi—clxxviii; also Dr. Sinha. *Economic Annals of Bengal*, p. 94.

raising of as large sums from the country as could be collected, to answer the pressing demands from home and to defray the large expences (*sic*) here. The Zemindars not being willing or able to pay the sums required, Aumils have been sent into most of the districts. These aumils on their appointment agree with the Ministers to pay a fixed sum for the districts they are to go to, and the man that has offered most has generally been preferred. What a destructive system is this for the poor inhabitants! The aumils have no connection or material interest in the welfare of the country where they make the collections, nor have they any certainty of holding their places beyond the year; the best recommendation they can have is to pay up their *Kistbundies*¹¹ punctually, to which purpose they fail not to rack the country whenever they find they can't otherwise pay their *kists* and secure a handsome sum for themselves These aumils also have had no check on them during the time of their employment; they appoint those that act under them, so that during the time of the year's collection their power is absolute On this destructive plan, and with a continual demand for more revenue have the collections been made ever since the English have been in possession of the Dewannee."

V

When the Committee of Secrecy to which reference has been made above was inquiring into the affairs of the East India Company, it found from the correspondence of the Company that the President and Council at Fort William were endeavouring to ascertain the amount of the 'Muffusul collections' or the revenues levied by the Rajas, Zemindars, or farmers in the several districts of Bengal, in order to fix their profits at definite and reasonable amounts. The real object which the President and Council had

¹¹ 'A contract for the payment of rent by instalments.'

in their minds was "to prevent in future undue charges in the collections, and to preserve the Ryots from oppression by undue, additional, and arbitrary demands." I shall now try to explain the nature of some of these arbitrary and additional demands which the poor peasant had to meet.

It appears from a letter¹² of Mr. Richard Becher, Resident at the Durbar, addressed to the Select Committee at Fort William on the 28th of March, 1770, that certain cesses under the name of 'Mathute,'¹³ were raised in the provinces of Bengal and Bihar and that certain expenses of the *Sircar* were met out of them *without the knowledge of the Company*. No information regarding either the cesses or the expenses had previously appeared on the public records of the Company, both being left under the management of the Ministers¹⁴ at Murshidabad and Patna. For reasons why these cesses were imposed, Mr. Becher referred the Select Committee to the following extract from a letter, dated the 16th January, 1769, which his predecessor-in-office, namely, Mr. Francis Sykes, wrote to him on resigning the office of Resident:

"You will find there are collections made separate from the statement, viz., on account of the expences (*sic*) of the Poonah, called Khallaut Bhâ, Pooshtebundy and Resum Nezarut; this mode of defraying these expences (*sic*) was established by Lord Clive and the Select Committee, and why they were not included in the statement, that the Company might have a fair account of their gross collections at one view, I cannot conceive; *it must, I think, have arisen from the fear the gentlemen of the Select Committee had, that the Company would not permit such an expence to be kept up at the Poonah, notwithstanding it is deemed so necessary in the eyes of the country people, and always held with the utmost veneration. The Pooshtebundy is a necessary expence. The Resum Nezarut*

¹² *Vide* the Bengal Select Committee Proceedings of April 28, 1770.

¹³ Or Mathote.

¹⁴ Obviously, Muhammad Reza Khan, Roy Dullub and Shitab Roy.

might be abolished, yet as this allowance to the under-Mutsuddies and officers of the Government is of an ancient standing, the abolition of it would have given disgust, and it was directed to be kept up, and divided as the Nabob thought proper."

It will be clear from the above extract that the Mathute was divided into three heads, namely:

Khilat Bhâ,

Pooshtebundy, and

Resum Nezarut.

I shall now deal with the nature of these cesses and also explain how the income derived from them was distributed. Khilat (or chelat) Bhâ was the name of the cess, or abwab, which used to be levied 'for defraying the annual charges of the dresses presented to the people in public employments at the time of the pooneah, and on their receiving any new appointment,' Khilat meaning a dress of honour.¹⁵ The total amount of the cess raised in this way greatly increased since the Company obtained the Diwani in 1765. Before the Company's accession to the Diwani, it was so small as Rs. 83000. But since then, 'each year,' to quote the words of the Select Committee, 'had swelled the account till it exceeded all bounds.' For instance, the total amount raised during the year 1766-67 was Rs. 2,16,870-10-0.¹⁶ This increase in the total amount levied from year to year was largely due to two causes. The first was the considerable charge of Khilats for

¹⁵ "The meaning is often extended to the whole of a ceremonial present of that nature, of whatever it may consist."

¹⁶ It was sicca rupees 2,68,139-12-0 in 1767-68; Rs. 3,24,247-11-10 in 1768-69 and Rs. 3,02,878-3-0 during the period from the 11th April, 1769, till the 28th March, 1770,

English gentlemen. For example, the Khilat account¹⁷ for the year 1766-67 shows that the total amount disbursed for the dresses of English gentlemen was sicca Rs. 46,750. Out of this amount the sum of Rs. 10,000 was spent on account of Lord Clive's dress; Rs. 6,000 on account of General Carnac's; Rs. 4,800 on account of Mr. Summer's; Rs. 3,950 on account of Mr. Verelst's; Rs. 5,500 on account of Mr. Sykes; and so on. The second cause was as follows. Formerly, the proceeds of this cess were applied to little else than the dresses of the Zemindars and collectors at the time of the Poonya, all occasional charges which were much more considerable, having been defrayed from the Treasury or the Nawab's Consummany.¹⁸ But since the Nawab's stipend was fixed at a definite figure¹⁹ after the grant of the Diwani to the Company, he declined to bear any part of the occasional charges. The result was that the whole expense fell on the assessment.

Thus was the poor peasant taxed to find money for presenting costly dresses of honour to men of means! And Lord Clive who

¹⁷ The sum of Rs. 2,16,870 10-10 raised in 1766-67 as Khilat Bha was spent as follows :

	Rs.
For the English Gentlemen	46,750
For the Nezarut	38,800
For the Mutsuddies and Mohores of the Kutchery and Canungoes	22,634
For the Nobkissen, etc.	4,357
For the Extraordinary Khilats	5,199-8-0
For people belonging to the Nabob	22,525
For Zemindars, Collectors, etc.	75,605-2-10
The amount allotted for the Nawab was	10,100

¹⁸ Consummany—Corruption for Khansamani: "The office or department which has charge of all expenses in a great man's house."

¹⁹ It was first Rs. 58,86,131-9-0; it was then reduced to Rs. 41,86,131-9-0 on May 18, 1766; further reduced to 31,81,991-9-0 on March 21, 1770; and finally fixed at 16 lacks.

had attended the first Poonya after the grant of the Diwani justified the custom of giving dresses to the members of the Council at Calcutta on the ground that it was essential to the dignity of the administration!

Secondly, the Pooshtebundy²⁰ was the name of the additional charges levied on the people for repairing bridges, embanking the sides of the river in the neighbourhood of Murshidabad and some other places, etc. It seems that the cost of supporting the banks of the river in the vicinity of Murshidabad was very high. Formerly, the expenses of supporting these banks, of repairing bridges, etc., were borne by the particular Zemindars whose lands were contiguous to them, and the Zemindars were 'proportionately eased in their rents'; but even then, on extraordinary occasions, great assistance would be given by the Government. Things remained nearly on this footing during the first two years of the Diwani, any extra expense being borne by the Treasury. But owing to the inadequacy of this method of supporting the banks of the river and the neglect and inability of the Zemindars, the banks were found in 1766-67 to have gone greatly to decay, and in some places, they even gave way. The result was that the country was flooded and that the city of Murshidabad was in a great danger in September, 1767. For these reasons, an assessment which had previously been borne by particular Zemindars, and which they were no longer able to bear 'because of the racked state of their rents,' was extended to other districts, and continued to be levied on them even though the necessity for the same had passed away.

Commenting on this cess in a letter addressed to Mr. Becher on the 28th of April, 1770, the Select Committee stated that it saw no reason why the Pooshtebundy which was a new cess and which was imposed in 1767 on account of "an extraordinary

²⁰ Pooshte-bund—Pushtah-bandi.

"Pushti—a prop or buttress; an embankment; bandi, making fast or repairing, i.e., Repairing the embankments."

calamity,' should after the banks had undergone one thorough repair, still have been levied, and even a larger amount should have been raised during the preceding two sessions than in that immediately succeeding the inundations.²¹ Continuing, the Committee said that since the practice of Mathute was so evidently pernicious, and since the banks were represented to be in good order, the general tax should be abolished and the local one should be reimposed, as soon as a certain outstanding debt on account of the former years was repaid.

Thirdly, the Resum Nezarat was the name of the 'dustore' or fee of the Nazir, and the Resum of ten annas²² was the fee of the Mutsuddies, of the Khalsah²³ cutchery. The post of Nazir was formerly of great repute. He was called the overseer and had under him all the peons, Chubdars, etc., who 'on pretence of collecting, plundered the country.' The office of Nazir was later on abolished as it was found to have been burdensome rather than advantageous; but the cess was continued for other purposes. The proceeds from the Resum of 10 annas were partly divided among the Mutsuddies (writers) and Mohores (clerks) of the Khalsa cutchery and partly spent otherwise.

In this connection I should like to refer to an interesting point in Mr. Becher's letter to the Select Committee. On his arrival at Murshidabad as the Resident at the Durbar, he found that his predecessor, Mr. Sykes, had received from the above-mentioned cesses an allowance of Rs. 2,000 per month, in addition to his salary of Rs. 3,000 per month obtained otherwise. Mr. Becher then

²¹ The total amount raised on this account was sicca rupees 148,975-9-19-3 in 1767-68; Rs. 218,166-12-17 in 1768-69; and Rs. 210,547-15-10-2 in 1769-70.

²² According to Mr. Wilkins's Glossary appended to the Fifth Report, a commission of 10 annas per million was exacted by the Nazir Jammadar, or head peon, on the treasure brought from the Mufussil or interior.

The total amount raised on account of these cesses was sicca rupees 112,989-12-19-0 in 1767-68; the corresponding amounts for the next two years were Rs. 1,76,532-13-10-0 and Rs. 1,57,243-7-2.

²³ The Exchequer.

applied to Muhammad Reza Khan for an explanation of the charge. He was told that according to the custom of the country, Mr. Sykes's table had previously been supplied with several articles of provision from the districts near Murshidabad. Certain inconveniences, however, having arisen from this mode of supply, Muhammad Reza Khan had proposed to Mr. Sykes that he should abolish the custom and receive 2,000 sicca rupees per month instead from the Pooshtebundy and the Resum Nezarat. Mr. Sykes accepted the proposal and the allowance continued to form part of the remuneration attaching to the office of Resident. Mr. Becher was receiving it when he wrote his letter to the Select Committee. It further appears from his letter that Mr. Verelst did not, when he was informed of this allowance, disapprove of its being continued, 'as he was sensible of the great expence (*sic*) attendant on the situation of Resident at the Durbar.'

I have explained above the nature of the three extraordinary cesses referred to in Mr. Becher's letter to the Select Committee. I may mention here that the total amount spent in the course of five years from 1766 'under the different heads to which the taxes called Mathutes were applied,' amounted to sicca rupees 21,72,102-9-19 as shown below :—

	Sicca Rupees
Khilat Bhā	13,36,018-13-0
Pooshtebundy	4,76,663-7-11
Resum Nezarat and Resum of 10 annas	3,59,420-5-8
	<hr/>
sicca Rs. ...	21,72,102-9-19
or £ st. ...	2,83,458-0-0

Mr. Becher, be it said to his credit, had made a few suggestions in his letter for freeing the Ryot from the 'arbitrary oppression' caused by 'the destructive mathute plan.' The Select Committee accepted some of the suggestions and adopted resolutions accordingly.²⁴ The Committee felt that 'all arbitrary cesses must

²⁴ *Vide* the Proceedings of the Bengal Select Committee, 28th April, 1770.

be so many instruments of oppression in the power of collectors' and more than suspected that a closer inquiry would 'lay open a most iniquitous scene of oppression and speculation.'

In adopting its resolutions the committee had two objects in view. First, the total amount to be raised by Mathutes should be strictly limited; and, secondly, the total amount to be so raised should be equitably distributed²⁵ among all the Diwani districts on the basis of their contribution to the total revenue derived from the Diwani lands in Bengal. In short, the Committee's aim was 'not so much to suppress the taxes, as to new-model them.' The consequence, it hoped, would be that the Ryot would not be 'exposed to sudden demands and perpetual alarms of new calls,' and that 'the pernicious influence of the mathute would be in all respects effectively restrained.'

In regard to the question of the Resident's allowance of two thousand rupees, the Committee decided that if it formed a part of his salary of Rs. 3,000 per month, it had no objection to it; but if it was to be in addition to that salary, it must be discontinued.

Having adopted these measures 'for the relief of the province of Bengal from the pernicious mode of taxation called Mathute,' the Select Committee considered it advisable to extend its enquiries to the province of Bihar, where there was reason to suppose that the same grievances were felt by the people. Accordingly, on the 9th of May, 1770, it wrote to James Alexander, Esquire, Supervisor of Bihar, enquiring whether any extraordinary charges corresponding to the taxes called Mathute in Bengal, were levied in Bihar.²⁶ If so, he was requested by the Committee 'to procure and transmit to it an exact statement of all such sums as were collected, exclusive of the Bundibust.' In reply, Mr. Alexander sent on the 24th of May, 1770, a statement "of

²⁵ This should be taken subject to its specific resolution regarding the *Pooshte-bundy* referred to before.

²⁶ *Vide* the B.S.C. Proceedings of May 9, 1770.

all extra collections and taxes²⁷ that were levied in the Bihar Province exclusive of the Bundibust." It appears from the statement that one heavy and injurious item of expenditure which was charged to these extra cesses, was the establishment of the Dawks belonging to the English Company, the Nizam and the Nawab of Murshidabad. On receiving this reply the Select Committee directed that the Nawab's Dawks should be continued as a proper mark of respect to the Government; but the Dawks of the Nizam should be allowed only in such places where the Company had none of its own. In regard to the other items of expenditure charged to the extra cesses, it left them to the discretion of the Supervisor who must be the best judge of their propriety or impropriety.

VI

Before I conclude this paper I should like to mention that more arbitrary cesses, under the name of Mathute, were actually levied by the collectors in the several provinces than what were accounted for to the Government at Murshidabad, and that the poor Ryot had thus to pay much more in various additional taxes or abwabs than what the authorities at Murshidabad knew or cared to know. The following facts²⁸ revealed as a result of inquiries made by Supervisors (appointed in 1769) at the instance of the Select Committee will illustrate my point.

Mr. Middleton wrote from Dacca on the 18th of May, 1771, that the district had paid a large annual Mathute which would appear to have amounted to Rs. 1,16,496-10-3; that part of the money so collected was remitted in the previous year to Murshidabad towards defraying the charges of Khilat Bhâ; and that the remainder was disbursed and misapplied by the officers of the Government at Dacca. In another letter, dated the 13th April, 1771, he had

²⁷ The total amount raised for one year was sicca rupees 1,08,742-11-6.

²⁸ *Vide* the Fourth Report of the Committee of Secrecy, 1773.

written that company of Sepoys and 40 burgundasses,²⁹ retained there 'for the use of the collections,' had, till then, been paid from a fund accumulated under the denomination of Mathute; and that the expenses of the Dawks established between that place (Dacca), Murshidabad, Chittagong, and part of the way to Calcutta, had been defrayed in the like manner.

On the 17th of August, 1769, Mr. G. G. Ducarell, Supervisor of Purnea, wrote to Mr. Richard Becher, Resident at the Durbar, as follows:—

“The Company have received a very considerable revenue from this country, but they have little known how it has been collected. You will be surprised to hear that, by the established mode of collections pursued for these three or four years past, the *Putta* or Agreement is never preserved between the collector and the tenant. At the end of the year, whenever the former knows that the latter has made any gain, he surely seizes it, notwithstanding the agreement being justly paid; by these means all industry is checked, and all confidence destroyed, and neither labourer, farmer, collector, and so upwards, to the Foujedar, having any trust in each other, *it has made the whole a chain of rogues and plunderers*; nor can any confidence be restored but by a long course of equitable government.”

Again, in another letter, dated the 13th December, 1770, he wrote: “It had been annually the custom there (Purnea), even long antecedent to our coming to the Dewannee, at the time when the Ryots had nearly paid their rents, according to the *putta* or agreement, to lay on further assessments there called *Bharri* and *Gandar* (which are words peculiar to that province, and have the same meaning as *Mhatoot* in Bengal) either from real or pretended deficiencies.”

²⁹ Men armed with matchlocks.

The Supervisor of Rungpore wrote to Mr. Becher on the 20th of August, 1770, that 92,000 rupees had been collected from the poor Ryots and "received by the Zemindars and creatures of Government employed in the collections."

Mr. Robert Wilmont, Supervisor of Jessore, wrote,³⁰ "That besides the avowed wages to the *aumils* in his districts, they had numberless perquisites, the amount totally unascertainable."

Mr. C. W. Boughton Rous, in a letter,³¹ dated at Nattore, the 4th of June, 1771, enumerated several Mathutes (or cesses) which had been levied from year to year since the Company's accession to the Diwani, and then made the following remarks:

"The multiplication of Mhatoot, which has taken place in this district since the Company's accession to the Dewannee, has been attended with the most pernicious consequences to agriculture, and the country in general; and that the continuance of such a system must inevitably end in its destruction. *These taxes arbitrarily imposed, and oppressively collected, through the rapacity and licentiousness of the aumils and their agents, have accelerated the general decline in agriculture and manufactures.*"

Lastly, I may quote an extract from a letter³² of Mr. Becher himself:

"The present destructive scheme of adding Demand on Demand under the name of Mathute, has been a material cause of the present distressed state of the country and I wish the word could be abolished and never heard of more."

The above extracts would indicate the position of the Ryots in Bengal and Bihar during the first few years of the Diwani, so

³⁰ In a letter on Murshidabad Consultations of 29th of October, 1770—*Fourth Report*.

³¹ Entered on Murshidabad Consultations of the 10th of June, 1771—*Fourth Report*.

³² Addressed to Governor Verelst on May 24, 1769.

far as the arbitrary cesses or abwabs were concerned. During those years the Company, although invested with the office of Diwan, did not actually take upon itself the task of collecting the revenues of the Diwani lands. Nor were its European servants quite competent at this stage for the task. It was therefore committed "to the management of Mahammed Reza Cawn"³³ who acted, "under the immediate inspection of the Resident at the Durbar," in conjunction with Shitab Roy (for Bihar) and Roy Dullab (for Orissa). The result, however, was, as Miss Monckton Jones³⁴ has rightly said, disastrous. "The whole horde of minor officials, Muttasaddis, Kanungoes, Amils, Zemindars, etc., were let loose to raise what they pleased from the cultivators and traders. If the victims appealed to the Naib Nazim or his Fauzdars, these had not the land-servants or peons by means of whom they had formerly enforced justice, and if complaints were addressed to the only man who had them, the English Resident, he could not tell right from wrong, and was besides peremptorily forbidden to interfere. The peasants were without appeal, and many in despair deserted their holdings, becoming vagabonds or dacoits or merely starving." This state of things continued practically till 1772, although palliative measures, such as the appointment of Supervisors in 1769, and the institution, in 1770, of two Councils of Revenue at Murshidabad and Patna under the direction of the Court of Directors, dated the 30th June, 1769, had been adopted in the meantime. In a letter dated the 28th of August, 1771, however, the Court of Directors wrote to the President and Council at Fort William.

"We are necessitated to seek . . . the full advantage we have to expect from the Grant of the Dewanny. It is, therefore, our determination to stand forth as Duan, and by

³³ The Bengal Select Committee's letter to the Court of Directors, dated January 24, 1767, para 13 *Vide* Verelst. A View of the Rise, etc., of the English Government in Bengal, Appendix.

³⁴ Hastings in Bengal, 1772—74, pp. 63-64.

the Agency of the Company's servants, to take upon ourselves the entire care and management of the Revenues. In confidence, therefore, of your abilities to plan and execute this important work, we hereby authorize and require you to divest Mahomet Reza Cawn and every person employed by or in conjunction with him, or acting under his influence, of any further Charge or Direction in the Business of the collections, and we trust, that in the office of Duan you will adopt such regulations and pursue such measures as shall at once ensure to us every possible advantage and *free the Ryot from the oppressions of Zemindars and petty Tyrants*, under which they may have been suffered to remain, from the interested views of those whose Influence and Authority should have been exerted for their Relief and protection."

This letter was received by the President and Council in Bengal on the 23rd of April, 1772, and action was taken by them accordingly. This brings to an end a chapter in the history of the land revenue system in Bengal in the early days of British Rule. Considerations of space, however, forbid me to deal here with the subsequent history of the question.

THE DECCAN AT THE ADVENT OF BRITISH RULE

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THE GREAT DEPRESSION

At a time when the whole world is beset by the evil of a great depression it is interesting to recall the memory of a similar calamity that overtook the Deccan along with the establishment of British rule. It will be remembered that the Deccan passed under the East India Company's government in 1818. For over fifteen years before that date the peaceful life of the Maratha country had been frequently disturbed. Armed forces belonging to rival noblemen often came into conflict leaving behind them a long trail of desolation. Bhils, Pindarees and other bands of reckless plunderers found easy prey in a country where the prowess of the prince had been shaken. Nature seemed to have imbibed the hostile mood of the human enemies of the Deccan peasantry. The year 1803 witnessed a serious famine which caused the death of a large number of people and of a much larger number of cattle and horses. As usual disease followed close on the heels of starvation, and that fell scourge of humanity, cholera, laid a heavy toll among the Deccan villages. Still the worst effects of war, internal disorder, famine and disease seemed to have been substantially overcome by the year 1818. The thinning of population had served to find occupation for the discharged soldiery and there was enough peace for the pursuit of normal economic operations. The Deccan Riots Committee observe in their historical chapter as follows: " In spite of these unfavourable circumstances

the agricultural classes during the period immediately preceding British rule were recovering from the heavy calamities of the wars in the beginning of the century. Their proximity to Poona, in which the wealth of subject and tributary provinces was collected and spent, gave them great advantage. The population was scanty and land proportionately abundant." It must be admitted that the farming of revenues in the days of Baji Rao II was an important cause making for the impoverishment of the ryot. All the same the general tone of economic life was definitely recovering when the final struggle with the British power developed. The conquest of the Deccan by the Company's forces was followed by an almost unprecedented depression and dislocation of business which continued to exercise the minds of the best administrators of the Company for over two generations.

Low prices, unemployment, heavy taxation, reduced production and indebtedness—all these familiar features of an economic depression were experienced in a very acute form. The annexed table on page 341 will indicate the nature and the extent of the fall in prices: .

This table is based on figures collected by the late Prof. H. Green¹ from the records of the Peshwa's Government and old family papers, and refers to prices prevalent in the Poona market.

¹ H. Green, Professor of Literature at the Poona College, who acted as the Special Correspondent of the Bombay Gazetteer and published in 1852 a review of the new survey and settlement operations, under the title "The Deccan Ryots and Their Land Tenure."

TABLE I

Article	Unit	1817			Average for 1821-32-33			Average for 1826-37-28			1852		
		Rs.		Index	Rs.		As	Rs.		As	Rs.		Index
		Rs.	As.	Index	Rs.	As	Index	Rs.	As	Index	Rs.	As.	Index
1. Bajree	...	7	8	100	4	13	64	5	10	75	4	10	62
2. Jowaree	...	6	5	100	4	7	70	4	10	73	3	8	55
3. Rice	...	8	9	100	8	9	100	7	0	82	8	9	100
4. Gram	...	10	0	100	8	9	86	8	3	82	6	11	67
5. Raw Sugar	Per Md. 40 seers 80 lbs.	8	14	100	7	4	82	7	10	86	5	0	56
6. Oil	...	11	7	100	11	11	102	9	1	79	5	8	48
7. Milk	...	4	7	100	3	12	85	3	0	68	2	4	50
Total	...			100			84			78			63

As Poona attracted the produce and the custom of a wide area the fluctuations in Poona prices were comparatively steady, and might be taken as representative of the Deccan tract. In the interior the movement was accentuated by local conditions as can be seen from the figures collected in Indapur, the first Taluka to be systematically surveyed and settled in the Deccan.

TABLE II

PRICES OF GRAIN IN INDAPUR²

Period, Average for	Unit	Jowaree			Bajree		
		Rs.	As.	Index	Rs.	As.	Index
1809—1818	Per Palla 120 seers 240 lbs.	4	5	100	4	7	100
1819—1828	do.	3	12	87	5	11	124
1829—1838	do.	2	5	54	3	0	68
1839—1848	do.	2	3	51	3	5	75
1849—1858	do.	2	13	65	3	7	77

It will be observed that both in the city of Poona and in the district the cessation of hostilities between the Peshwa and the Company was followed by a prolonged period of falling prices, which showed no tendency to rise till the middle of the century. The period of low prices was inaugurated by a sudden drop in the

² This table is prepared from price statistics collected from original sources and published in Selections from the Records of the Government of Bombay, New Series, No. CVII. Papers relative to the revision of the assessment in Indapur Taluka of the Poona Collectorate.

years following the establishment of British rule. This stage of the depression is illustrated in the following table:

TABLE III

AVERAGE PRICES IN THE POONA MARKET,³ PER PALLA (120 SEERS).

Grain	1819			1821			1822			1823		
	Rs.	As	Index	Rs.	As	Index	Rs.	As.	Index	Rs.	As.	Index
Jovaree ...	10	14	100	5	7	50	5	0	46	4	0	37
Bajree ...	10	14	100	6	5	58	3	0	28	5	7	50

The representative character of these, like most other price figures in India is certainly not above reproach. But there is every reason to believe that they exhibit the course of prices in the Deccan during the period following the British conquest. A sudden fall in prices followed by a long period of low prices produced unfavourable results on almost all classes of the population. In the rural areas the classes of labourers, artisans and rent receivers had to be content with receiving the same quantity in satisfaction of their claims—as payments were still made in kind on a large scale. But whenever they had to sell their ‘earnings’ either for the purchase of other commodities, which had on the whole declined less than the staple crops, or for the payment of fixed money charges such as debts and interest they had to bear an enhanced burden. The chief sufferers from the great depression in the rural areas were, however, the cultivating classes. In so far as they consumed their own product and paid their dues in kind they did not stand to lose. But they had to pay in cash the revenue to the new Government and interest and debts to the *savakar*, besides making sundry purchases. With prices so suddenly and steeply collapsing it is no wonder that the Deccan

³ These figures are based on the contents of Prof. Green's book already referred to.

Ryot almost broke down under the enhanced burden. The story of the ill-advised attempt of the British officers to exact from the ryots as actual realisations the rates of land revenue which were sanctioned only as an ideal under the Maratha government is now widely known. But the coincidence of this terrible rack-renting at a time of an almost unparalleled depression has not received the attention that it deserves. The evils of low prices and high rent which prevailed well over a generation had cumulative results in permanently sapping the vitality of the Deccan peasantry.

The population of the cities, of which there were only a few, e.g., Poona, Nasik, Pandharpur, Ahmednagar and Sholapur, stood on the whole to benefit by the prevailing low level of prices. And indeed those who could manage to get employment at anything like the old level of wages and profits were the better off for the change. Under the influence of the Company's Government the last remnants of the system of payment in kind were wiped out from the cities. Exact figures for wages earned by the different classes are not easily available. But the following table based on figures collected by Prof. Green from original sources might serve an illustrative purpose.

TABLE IV
AVERAGE MONTHLY RATES OF WAGES AT POONA.

Class of Workers	Average for 1798—1820			1852		
	Rs.	a.	p.	Rs.	a.	p.
Carpenter	15	0	0	15	0	0
Brick-layer	15	0	0	15	0	0
Assistant servant to above ..	5	10	0	3	8	0
Female servant	3	8	0	2	12	0
Tailor	15	0	0	15	0	0
Sawyer	15	0	0	16	0	0

If these figures are any indication of what was going on in the urban parts of the Deccan in the early years of British rule it would appear that the superior classes of artisans and labourers at any rate succeeded not only in maintaining their position but in actually securing higher real wages. By a curious twist in the fiscal policy of the new government, traces of which are not altogether removed even to the present day, the real comparative advantage reaped by the non-agricultural classes was even greater than what is indicated by their gross earnings. While the wholesome elasticity of the land revenue policy of the Maratha administration was abandoned by the Company's administrators, they allowed, mostly out of political reasons, the Mohturfa taxes on trades and professions to lapse. These taxes though levied at customary rates had done much to introduce equality in the scheme of the Maratha taxation. The officers of the Company were not ignorant of these taxes or of the principles on which they were based. Mr. Chaplin,⁴ the first Revenue Commissioner in the Deccan, has given a fairly exhaustive list of these taxes from which the following information is gathered.

The trades and professions were grouped into classes and differing rates were provided for each of them. Within a group the members were made to pay a tax which was based on an arbitrary assessment of their ability. In Poona *savakars* or bankers who dealt chiefly in bills of exchange and in jewels and valuable cloth formed the first class. The second class was formed of *sarafs*, money-changers, and less opulent jewellers. The cloth, grocery, grain, hardware, perfumery, and other trades were separately classed. It is recorded that the bigger grocers paid fifty rupees a year which was also the sum paid by some of the well-known jewellers. The personal standing of rich merchants with the court often influenced their assessment and exemptions

⁴ 'A Report exhibiting a View of the Fiscal and Judicial System of Administration introduced into the Conquered Territory above the Ghauts, under the authority of the Commissioner of the Dekhan,' by William Chaplin, (of the Madras Civil Service, Commissioner in the Dekhan). Printed at the Courier Office, 1824.

were granted in some cases. The petty professions such as carpenters, weavers, iron-mongers, stone-cutters, washermen, barbers, enamellers, masons, etc., had also to pay a tax the incidence of which was equally arbitrary. In Yevla, the centre of silk-weaving and dyeing industry in Nasik District, the professions were more or less organised in guilds, *tuefs*, each paying a lump sum to the state through its president, the Chaudhari, who distributed the burden among the members. Nobody can claim that the Molturfa taxes satisfied all the modern canons of taxation, or that their abolition during a period of disturbed and depressed trade was unjustifiable. But the Company's Government did not pay equal heed to the canons of ability and convenience in the assessment of land revenue which, as the principal source of public income, was collected for a long time at unjustifiably high rates.

It must not be understood from these remarks that the professional and the artisan classes in urban areas were having a prosperous time. The extent of the depression was so very all-pervasive and the causes underlying it so fundamental that no class of population escaped without serious injury. The clerical and administrative class found itself without any employment under the new régime. With the disbanding of the armies of the Peshwa and his sirdars not only the soldiers but the large number of Mootsaddees employed in the clerical, the accounting and political branches lost their employment. The bigger Mootsaddees at the court and with the noblemen had no part to play in the new order. The Company's Government confirmed the personal Jahageers and pensions of the leading Mootsaddees and in the employment of clerks the collectors of districts were instructed to prefer the unemployed Mootsaddees of the old government. But it was the deliberate policy⁵ of the new administration to have a fairly thick sprinkling of foreigners, that is, Indians from other provinces which had already passed under British rule, in the

revenue and administrative services. The scope for such employment under the new Government was so narrow that hardly one-fifth⁶ of the displaced servants could find re-employment. The rest had to live on their scanty savings or to take to petty trade.

The trade and industry of the country were in no better plight. With the disbanding of the native armies and the Peshwa's court the population of cities, particularly of Poona had considerably thinned. Owing to the depression and unemployment there was very little trade demand, especially for articles which used to be consumed on a large scale by the courtiers and their dependents. The abolition of the old revenue system under which the bankers were entrusted with the forwarding of revenues collected in the villages gave a fatal blow to the indigenous banking business. The general depression in trade and the cessation of warlike activities also hit the Banking houses.

But the worst sufferers in the new order were the soldiers and in a less degree the artisans. The rout and the disbandment of the armies of the native power were followed by the dismantling of forts and the reduction in the Company's army. It is estimated that under the old government almost all the Maratha families of the cultivating class had at least one of their members employed with the army and the earnings of the soldiers were an important addition to the family income. In fact in a precarious tract like the Deccan these very earnings often constituted the dividing line between a well-to-do and a hand-to-mouth living. The disbanded soldiery, whose number was calculated by Mr. Chaplin at about 30,000, had mostly to fall back upon the family pursuit of agriculture. Thus instead of the earnings of cultivation being added to by those of war the disbanded soldiers had to be supported out of the produce of a depressed and overstocked industry. So long as the soldiers had their savings the evil effects were not very obvious, but in course of time the depressing influence of the contraction of the field for lucrative non-agricultural pursuits was

⁶ Chaplin's Report, Para 319.

visible in the growing impoverishment of the respectable Maratha families. Those of the unemployed soldiers who had no connection with the laud either migrated to other parts where wars were still going on or were added to the scum of the cities.

It has been noted that the general contraction of economic activity and the falling off of the court demand adversely affected the fortunes of artisans. There is another factor of a far-reaching importance which also helped to hasten the ruin of this class. The new foreign rulers and their native dependents came to indulge in habits which could be satisfied only by foreign imports. Whereas it was the policy of the Peshwa and his noblemen to encourage and subsidise skilled local artisans the new government and its agents placed a definite premium on foreign imports. The direct and the indirect, the long-term and the short-term, results of the radical change in the wants of the money classes reduced the artisans to abject poverty. Prof. Green observes, "under our rule an unheard of portion of the revenue of the country is spent for foreign commodities. A Governor, a Member of Council, a Judge or a Collector does not, as a native Raja or Jahagirdar would, spend his income on crowds of relatives and hangers—on of all kinds, creating a large demand for Bajree, Jowaree, Ghee and Gul—he requires Long Acre carriages, Arabian horses, French and Spanish wines, Parisian and London Millinery and a long list of foreign etceteras. The rich native also now imitates him in almost all these things, and even the comparatively poor one expends, whatever revenue he may have beyond what is just sufficient to supply him with necessities, in English cloth and copper, and China silver and silk."

The sudden and continuing fall in prices, the prevailing unemployment, the reduced condition of all trades and the desperate state of the public finances, could not but attract the attention of the leading officers of Government and of the few non-official gentlemen who in those days took an intelligent interest in such matters. It was natural that the fall in prices and the reduced condition of agriculture should attract more attention than any other feature of the depressing phenomenon. By common consent

the misguided and harsh revenue measures of the early administrators of the Company were held responsible for much of the evil. As Lieut. Wingate observed⁷ in 1841, "There can be little doubt that the overestimate of the capabilities of the Deccan formed and acted upon by our early collectors drained the country of its agricultural capital, and accounts in great measure for the poverty and distress in which the cultivating population has ever since been plunged." But the evil of low prices, unemployment and poverty was too universal to be explained away by a single factor, however important it might be by itself.

Over-production and under-consumption had their own supporters in the controversy⁸ that developed on the subject in official reports and non-official publications. It was contended that owing to a larger number of people having engaged themselves in agriculture more land had been brought under cultivation and hence the supply of the staple grains had increased beyond what was warranted by demand. This contention was falsified by the shrinkage in area under cultivation due mostly to rack-renting. It is true that as from the year 1835 the new survey assessment was introduced in taluka after taluka, more land was brought under cultivation and the total production increased. But as an explanation of a phenomenon which was experienced with contract-

⁷ Selections from the Records of the Government of Bombay, New Series, No. C11, 1877. Papers relative to the rates of Assessment in Indapur, Bhimthadi, Pabal and Haveli Talukas of the Poona Collectorate.

⁸ The reports of Settlement Officers are full of references to these differences. Though in the initial stages of the depression emphasis was laid by individual officers on particular factors, such as reduced demand and enhanced supply, it was discovered and freely admitted as the period advanced, that the shortage of currency and the appreciation of treasure were the principal causes of the continued fall in prices. It is a different matter that this appreciation of the fundamental cause of the price slump was not followed by an adequate easing of the land revenue demand, which went on steadily increasing. Lieuts. Nash and Wingate, and Lieut.-Col. Francis were the principal officers who went into the merits of the price controversy. That non-official gentlemen were taking a keen interest in the matter is indicated by the reference to the *Indian Economist* (see footnote 9) and by the work of Prof. Green.

ing as well as expanding cultivation excessive supply could have no significance. Those who pointed to the reduction in demand as a principal cause of the depression were on surer ground. The constant warlike activity of the Maratha government kept up a very strong demand for most articles and especially for grain and fodder. British peace and British administration spelled reduced demand for the products of the farmer as well as the artisan. There were, however, more subtle forces that were working in the direction of lowering prices.

In the first place, there was the scarcity of treasure. The employment of the Maratha troops in other parts of India had always brought to the Deccan a steady flow of specie in payment of the services of the soldiers and other camp followers. The *Chauth* and *Sirdeshmukhi* levied from other provinces was remitted to Poona through bankers. Under British rule this inflow of specie ceased altogether and as the old stock was gradually spent out a considerable scarcity of treasure must have been caused. A fall in prices originally induced by a great and sudden cessation of demand was drawn out and perpetuated by a growing scarcity of specie. This was a period in which the means of communication between the different parts of the Deccan and between the Deccan and other parts of the country were being steadily improved. The trade relations between India and the external world were also becoming more and more intimate. The broad movements of the price-level due to world supply of the precious metals must have produced some influence on the situation in the Deccan as well. That this was so might be inferred from the fact that when the great depression in the Deccan at last showed a tendency to lift, it did so in sympathy with the cheapening of the precious metals at about the middle of the last century. It is interesting to record that this was the view expressed by a journal called the *Indian Economist*,⁹ which in 1875 had undertaken a study of the economic conditions in the Deccan.

⁹ A reference to this Journal is made in the First Revision Settlement Report of Madha Taluka in the Sholapur Collectorate. Selections from the Records of

It is more than probable that the prices in the Deccan during the period immediately following the introduction of British rule were affected by shortage of currency as much as, if not more than, by the scarcity and appreciation of specie. Under the Peshwa's¹⁰ Government mints for the coinage of copper, silver and gold were established in different parts of the country. Many of these were run by private licensees under the regulation and supervision of the state. It was easy for merchants and bankers to get their bullion coined at these mints, and thus the supply of currency was 'automatically' adjusted to the demand. Under the British¹¹ Government all these mints in the districts and smaller towns were closed and for a time even the Poona mint was suspended. This led to great hardship among the business community and hence the mint had to be reopened. It seems to have been the policy of the early administrators to concentrate minting at Bombay and Madras. But as the trade relations between the different parts of the two presidencies were not brisk great shortage of currency was experienced in several localities. The representations of local officers and businessmen led for a time to the continuance of the mints at Poona and Chandor in Nasik. But on the whole there appears little reason to doubt the validity of the conclusion that a policy of concentration of currency supply in advance of the commercial unification of the country made for low prices in several tracts.

The termination of the inflow of specie into the Deccan, the rising prices of gold and silver, the inadequate supply of currency and the growing demand for its services on account of the expansion of trade and the replacement of barter, all these special and general influences, produced a very prolonged and, on the whole,

the Government of Bombay, New Series No. CL. It would be interesting to have further information of the career of this journal.

¹⁰ Ranade, *Currencies and Mints under Maratha Rule*.

¹¹ Mr. Chaplin's Report.

harmful period of low prices in the Deccan. In the European¹² countries also the period between 1820 and 1850 was one of falling prices. The cessation of the Napoleonic wars had given a new impulse to the consolidation and extension of trade relations. At a time when the demand for the means of exchange was rapidly increasing the output of the precious metals was increasing very tardily. The situation was rendered more acute by the fact that over a large part of the continent money economy was replacing barter during this very period. In all these respects, as also in the final uplifting of the price-level in the middle of the century we trace a close parallel between what was happening in the Deccan and what was going on in the advanced parts of the world. In fact the era of the interdependence of internal and world prices was inaugurated in the Deccan during this period following the advent of British rule.

¹² W. T. Layton's *Introduction to the Study of Prices*, Chapter V.

POST-WAR DEVELOPMENTS IN MONETARY THEORY

(PART II)

BY

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1. Introduction.

It will be remembered that last year in introducing this subject I had expressed my inability to exhaust it for want of space and time, etc. I had not therefore dealt with the topics like 'the new ideas as regards the nature and functions of money, the gold bullion standard and the effects sterilising gold started by the United States of America, etc.' I had hoped that some other members would deal with them and thus all the aspects of the subject would come under notice of the conference. It is to be regretted that the subject did not attract the amount of attention which it deserved and therefore it had again to be included in the list, this year. I therefore take this opportunity to give an account of some of the remaining problems which have come to the fore in this direction. I am afraid the subject is so vast that it will not be possible to finish it within one single paper even this year—specially because the space is so limited. I have therefore omitted the discussion of the problem of "Stable Money" or what is known as the question of suitable "Standard." This requires at least a full paper for itself.

First let us see what a revolution has taken place or is at present developing in the peoples' ideas regarding the nature and functions of money.

2. The Nature of Money.

The first question as regards the nature of money is: What is it? A most facile answer to this question used to be given in the text books that it was the medium of exchange. For instance, let us see what some of the writers in the pre-war days said:

(1) "It is the medium by which exchanges are effected."
(*Taussig*).¹

(2) "... And the commodity itself will become a
'currency' or medium of exchange." (*Wicksteed*)²

(3) "... Money is the mere instrument of transfer."
(*Mill*)³

(4) "... I think it convenient for many purposes to keep close—as Bagehot implicitly does—to the use of the term 'money' current in the money market, and to denote by it the whole of the ordinary medium of exchange." (*Sidgwick*)⁴

(5) "In its simplest form money is a concrete medium of exchange." (*Cannan*)⁵

(6) "Thus money may be called current commodity, because it is merchandise chosen to run about as a medium of exchange." (*Jevons*)⁶

All this has changed and the following ideas now find greater favour with the post-war writers.

¹ Principles, Vol. 1 (1911), Macmillans, 1920 Ed.

² Commonsense, Vol. 1, p. 136, Routledge, 1933 Ed. The book was originally written at the end of the last century.

³ Quoted by Sidgwick in his Principles, p. 230. Macmillans, 1924 Ed. First published in 1883.

⁴ Principles, p. 232. Macmillans, 1924 Ed. First published in 1883.

⁵ Elementary Political Economy, p. 31. Third edition. Oxford University Press. First published in 1888.

⁶ Political Economy: Science Primer Series, p. 105. Macmillans, 1919 Ed. First published in 1878.

- (1) "Something which is merely used as a convenient medium of exchange on the spot may approach to being money, inasmuch as it may represent a means of holding General Purchasing Power. But if this is all, we have scarcely emerged from the stage of Barter. Money Proper in the full sense of the term can only exist in relation to a money—of—Account, namely, that in which debts and prices and General Purchasing Power are expressed. Money itself, namely, that by delivery of which debt-contracts and price-contracts are discharged, and in the shape of which a store of General Purchasing Power is held" (*Keynes*)⁷
- (2) " ' Money ' is to be taken to be convertible with ' currency ' and therefore to consist of all those things which are (at any time and place) generally current without doubt or special inquiry, as means of purchasing commodities and services, and of defraying commercial obligations." (*Marshall*)⁸
- (3) " Money is therefore a commodity chosen by common consent to be a measure of value and a means of exchange between all other commodities." (*Thomas*)⁹
- (4) " Money is circulating purchasing power By ' money ' economists usually mean anything that (i) passed from hand to hand throughout a community in payment for commodities and services, and (ii) regularly taken with the intention of offering it in payment to others, and (iii) customarily received without assay or other special test of quality or quantity, and (iv) received without reference to or reliance upon the personal credit of the one who

⁷ A Treatise on Money, Vol. I, p. 3. Macmillans, 1930.

⁸ Money, Credit and Commerce, p. 13. Macmillans, 1923.

⁹ Elements of Economics, p. 387. Gregg, Third edition.

offers it To cover all this, we shall use the term 'currency'." (*Foster and Catchings*)¹⁰

- (5) "Now anything which is generally accepted as means of completing contracts, and liquidating debts, is called money. Money arises as a matter of custom, but in all modern societies it has been crystallised by law" (*Lehfeldt*)¹¹

- (6) "In this book, the term money will be used to denote anything which is widely accepted in payment for goods, or in discharge of other kinds of business obligations" (*Robertson*)¹²

Although none of these post-war explanations strictly conforms to the rules of logical definition, yet the main underlying idea is sufficiently clear. If money is to be defined with the help of any one of its functions rather than by stating its own genus and differentia, then we had better take the most fundamental and the primary function which is, that it is the common measure of value, and not a derived one, viz., that it is the medium of exchange. The fact that this latter is a mere corollary of the first is more and more coming to be recognised as time passes. Anything is used as a common medium of exchange simply because it measures value. But we cannot reverse the process and say that anything measures value in general because it is used as a medium of exchange. Both parties to an exchange transaction instinctively attempt to compare the value of the article which each of them obtains with that of the one which he is giving. Under barter *every article is thus a medium of exchange* because it measures the value of any other with which it is being exchanged at the moment. To say therefore that money is a medium of exchange is neither to point out its genus nor its differentia. There are

¹⁰ Money, pp. 17-18. Second edition Pitman.

¹¹ Money, pp. 7-8. Oxford University Press, 1930 edition.

¹² Money, p. 2. Cambridge Economics Handbooks, 1928 edition.

many media of exchange which cannot be put in the same general class with money. In fact everything which can be, or actually is, exchanged is a medium of exchange. To say that money is a medium of exchange therefore amounts to little more than asserting that it is a thing which possesses exchangeability.

Let us put all this in a different way. There is a common saying, viz., "Beautiful is that beautiful does." We can follow this and say that money is what money does. Now what does money do? Money does many things which are done by many other things also. It is therefore no use enumerating all the functions which money performs and call that inventory as the definition of money. There must be something very peculiar to money which is not common to any other thing. It is obvious that money does not satisfy any of the three elemental wants of man, viz., food, clothing, and shelter. It is not a primary commodity. We shall therefore class money as an 'instrumental good.' So much about its genus. It is misleading to describe money as that good which facilitates exchange. It is true that it does facilitate exchange. But the cases in which it does not do so at any rate directly are far more numerous than those in which it does. Nor can this work be described as its primary function. It facilitates exchange because it does something more fundamental, and which is not done by anything else among those which also facilitate exchange and thus in this respect are equal or rival of money, i.e., instruments of credit. Now what is that which money does and which instruments of credit do not do? It is the work of measuring exchange value of all economic goods other than itself. As was pointed out before every article measures the value of any other with which it is being exchanged at the moment. But it is only money which measures the value of every other article in general and not only of any particular one at any time. We estimate the exchange value of any and everything in terms of money. We cannot do that in terms of cheques or bills of exchange or any other instruments of credit. It is perfectly true that cheques or bills of exchange also complete our exchange transac-

tions—and in many cases without any transfer of money at all, i.e., simply through entries in the books of banks. But all instruments are based on money. Money serves as the foundation of all credit by measuring the value of everything—even of the instruments of credit.

All the instruments of credit and other means of exchange must be translated and expressed in terms of money before they can facilitate exchange. The facilitating of the measurement of exchange value therefore is the greatest service of money even in cases where it serves as medium of exchange. It should be remembered that money measures values not only in exchange transactions but also where there is no exchange, e.g., in the case of the stock valuation done by the shopkeepers, or the valuation of social or national properties like gardens or public buildings and other private and public assets.

In the light of all this the definition of money which makes the nearest approach to truth would seem to be that money is that instrumental good which is commonly used as the measurement of exchange value of all other economic goods.¹³

This fundamental idea is also expressed in the following ways—

- (1) Money is the common denominator of value (*Jevons*).
- (2) Money is the standard of value (*Lehfeldt*).
- (3) Money is the unit of account (*Cassel*).

“The medium of exchange” theory of the nature of money has, however, given rise to a great confusion which has in fact increased rather than diminished during the post-war period. The believers in this theory find a great difficulty in distinguishing between money and instruments of credit. Thus we hear people speaking of ‘bank money’ and ‘cheque currency’ and that we should

¹³ It should be noticed that the function of money which we have called the most fundamental and primary, viz., that money measures values is not itself a post-war discovery. All that is implied in the text is that its importance is more clearly seen now than was the case previously.

regard 'demand' or 'current' or 'chequable' deposits as equivalent of money. These instruments (or kinds) of credit facilitate exchange as nicely as money, and are therefore as good media of exchange. They have the same effects on the value of money or general level of prices as the quantity of money. According to this school, for all practical purposes they are as good as coins and notes and should therefore be regarded as money. It is frequently said that there is no fundamental difference between a note and a cheque. This again is a mistake. Both of them, it is true, originate with the deposit in banks (real or fictitious, it does not matter). But the note is a promise and the issuers' own obligation, whereas the cheque is an order and in this case the banks' obligation to pay is conditional. The acceptance of a cheque by a creditor is also fundamentally, if not formally, conditional. The cheque is not a final settlement of a debt till the bank drawn upon has not honoured it. All this does not amount to saying that the cheques are undesirable and that the growing intangibility of money should not be welcomed. We are simply pointing out why cheques should not be regarded as money.

Again, if one kind of credit is to be regarded as money there is no reason why other kinds should also not be so regarded. The absurdity of this position at once becomes clear. We steer clear of this difficulty if we treat money, not primarily as the medium of exchange, but a unit of account. These two modern ideas cannot run parallel to each other for a long time. Sooner or later it is bound to be recognised that the instruments of credit serve as a medium of exchange only because fundamentally their own value is measured in terms of money. You can buy a commodity with the help of a cheque, but before the cheque is drawn and handed over to the seller, money has done its work, i.e., the buyer and the seller have agreed in their measurement of the value of that commodity. Cheques and bills of exchange do not measure values. But money does. Nor does the fact, that the supply of, and the demand for, instruments of credit have the same effect on the value of money, or the general level of prices as the supply of and

the demand for money itself, entitle them to be included in the category of money. There are many things in the world which have the same effect on their value as the changes in the supply of or the demand for those things themselves. Yet nobody thinks that the substitutes for anything can be (or should be) regarded as the thing itself. Instruments of credit are good substitutes for money in some respects. In some other respects money cannot be substituted at all. But the substitutes for money will always remain substitutes till they do not perform exactly the same task as money, i.e., measuring of values.

We must also briefly refer at this stage to the confusion of the terms 'money' and 'currency.' Some writers use these two terms indiscriminately, as if they were synonymous. The post-war general tendency, however, is to use the term 'money' in a wider sense than 'currency.' I personally do not like this and would rather reverse the process. Prof. Cannan for instance, thinks that the meaning of the term 'currency' is sufficiently indicated by its etymology; i.e., something which 'runs.' According to him it is only coins and notes 'which are said to be 'current' because they 'run' easily from hand to hand.'¹⁴ Their quality for 'running' is strengthened because they are declared to be 'legal tender' by the state, i.e., the creditor can be legally compelled to accept them in final discharge of debts owed to him. "In short, the essential feature of currency is to be current—that is, to 'run' easily from hand to hand in consequence of having secured, no matter by what means, the quality of general acceptability at known rates."¹⁵ I would add that this quality of general acceptability which enables the coins and notes to 'run' is again limited by space. The coins and notes 'run' within the country of issue.

But surely in that sense they do not differ from cheques and other instruments of credit. That notes and coins 'run' more

¹⁴ *Modern Currency*, p. 2. P. S. King, 1931.

¹⁵ *Ibid.*, p. 4.

easily in a country is true enough. But the area within which 'Bills of exchange' 'run' transcends the national boundaries. Cheques also undoubtedly 'run,' within a limited sphere though. The limits of space cannot be made the basis of any scientific classification. Everything that is 'current' no matter within a limited or an unlimited field is 'currency.' But only that which measures value is 'money.' However, this is after all a matter of terminology and Prof. Cannan is quite right in saying that it is useless 'to stand in the way disputing' and it is worth one's while to do the 'salving' of one's 'conscience completely by the simple expedient of scratching out 'currency' and substituting 'notes and coin.'¹⁶

Some other concepts of money have also found favour with a few economists. For instance,

(1) Most of the German economists and the British Treasury represented by Mr. Hawtrey take the view that money is merely an objective representation of debts which it legally enables one to settle. This is really not much different from saying that money is the medium of exchange. Usually the concept of debt involves a period of time. There is the transfer of goods and services on one side and there is the transfer of money after some time on the other. But if we think of it, a cash transaction also involves a debt only with the difference that that debt is one in respect of the liquidation of which the element of time has become very short. All that we have urged against money being defined as the medium of exchange therefore applies also to defining it as a means of discharge of debts.

(2) Knapp thinks that money is the means of payment. In his opinion means of payment and the means of exchange are not the same thing. Everything which is exchanged is a means of exchange. But payment is not a mere transfer. We make payments also with pieces of paper which are exchanged simply because they are means of payment. On the other hand although

¹⁶ Ibid., p. 8.

all goods and services are means of exchange yet they cannot be regarded as means of payment. According to Knapp the essential characteristic of a means of payment is that it expresses units of value. Thus this concept turns out, to be not very different from the one we have advocated above.

(3) Let us take one more concept. It is said that money is a claim on the products of society or that money is general purchasing power. This is explained by saying that anyone can have goods and services produced by society only to the extent that he has supplied himself or is supplied by others with a claim. In this sense money is an evidence or a certificate of the fact that the possessor rendered some good to society or somebody else did so on his behalf and that a similar amount of good should be done to him by society in the manner he himself chooses. There is a big grain of truth in this idea. But in reality this is nothing more than looking at exchange from an angle opposite to that of discharging of debts. An exchange transaction can be looked at by either party to it from the viewpoint of its own claim or obligation. Secondly, to say that money is general purchasing power or a store of value is simply using a metaphor rather than a scientific expression. This gives the impression that 'purchasing power' is something physical and can be measured as the 'horse power' of an engine or the electric power in a battery is measured. We shall see that more clearly later on in connection with the discussion of functions of money.

3. The Composition of Money.

Next comes the development as regards the contents of money. To put it baldly the question is: should money be made of something valuable? The nineteenth century economists used to discuss the merits of this or that metal selected for coining and frequently spoke of the 'intrinsic value' of money. That meaningless phrase has now almost disappeared from the text books. 'Value' after

all is nothing concrete. It is only a relation and relation must exist at least between two things. It could not be embodied in any single thing. Even the concept of 'value in use' can have no meaning apart from a relation between the user and the article consumed. 'Usefulness' and 'desirability' which seem to be implied by the phrase 'value in use' is supposed to be an attribute of objects. But a little consideration will show that nothing can be useful or desirable unless there is somebody to desire or to use a particular object. A diamond is not useful or desirable (i.e., an object of desire) for one who does not know how to use it. Its desirability or usefulness comes into being only when somebody appears on the scene who desires a diamond either for ostentation and ornamentation of his body or for some other purposes such as to use it in medicine or for cutting the pieces of glass, etc.

'Intrinsic value' was meant to indicate that a coin had two values—'the face value' or the value given to it by the stamp of the issuing authority and the value of the metal contained in it. But even if there was any necessity of making this distinction, the phrase employed was most unfortunate and a most misleading one and its disappearance is to be welcomed rather than regretted. The possibility that the value of the metal contained in a coin may be different from the one given to it by convention or law is not denied. This was seen from the very beginning as regards the token coins of small denominations. But nobody takes any notice of the copper or bronze contained in a small coin and no important theory is based on this distinction. If in some cases it becomes necessary to make such a distinction at all, we now speak of 'metallic value' and the 'face value' and not of 'intrinsic value.'

Similarly, the discussion of the attributes of particular metals for the purposes of coining, is also fast disappearing from the text books on money. Thus we do not speak so much now of 'durability,' 'divisibility,' 'portability,' and so many other 'ilities' in connection with the selection of the substance of which money is to be made. This is so because except the token coins

minted for small transactions we do not make 'standard money' of any metal whatsoever in the modern—or shall I say in the post-war world. Gold coins used to be thought an indispensable concomitant of the 'gold standard.' But the post-war restoration of that standard has dispensed with what seemed, at one time, to be indispensable. Fundamentally there is no difference between a note and a token coin and for the purposes of milling such coins practically all metals are of equal worth. If I mistake not, Germany actually milled iron-marks during the post-war period. The former idea that money must be made of something valuable is really based on two misconceptions. One was that primarily money was the medium of exchange and the other which was a natural resultant of the first, that it must be a physical commodity. The light as regards the true nature of money is now gradually dawning upon humanity. Just as the intelligence and proficiency of a candidate sitting for any examination can be tested, measured and compared with that of any other examinee with the help of the device of allotting marks for the correctness of answers, similarly value can be measured by means of some convention universally agreed upon within a community and legally recognised by the authority. Marks obtained in an examination are purely conventional and abstract. Similarly, a convention can be established as regards measurement and comparison of values. This is not fiction but fact and the world is coming to recognise it. There is no difficulty in imagining that if by some chance all the so-called money were thrown into the bottom of the sea but people continued to think that it still existed, they could still calculate the values of things in non-material rupees, annas and pies and the world will not be poorer for that. It is quite apparent that the measure of value need not also be the medium of exchange. The settlement of accounts with the help of book transfers through banks is an unmistakable development in that direction. Money is becoming more and more spiritualised every day. First great step in pricking the bubble of the 'commodity money theory' was taken when people woke up to the realisation that token money can

measure values as satisfactorily as the 'full-bodied standard coins.' The next great stride was made when people accorded the same general acceptability to convertible paper money as to the gold or silver coins. Then came the inconvertible paper. Final disillusionment was reached when people saw that there are various denominations of money which do not exist physically at all, and still they do the primary work of money, i.e., measurement of values or keeping of accounts, as satisfactorily as its other physical representatives. For example, a guinea does not exist and still in quite a large number of firms in England accounts are kept in terms of guineas. Similarly, in Germany for quite a long time after the war all transactions were recorded in terms of gold marks although they did not exist and could not therefore pass from hand to hand. "Ideal money or money of account is that in which accounts are kept. In the middle ages, when actual money was continually tampered with, the continental merchants were compelled to keep accounts in *scudi*, which were not coined."¹⁷ In a particular island inhabited by certain primitive people immovable stones were regarded as money. Only, they were not delivered and remained lying where they were. The purchaser simply acknowledged the passing of his ownership of them to somebody else from whom he bought something. Similarly, the 'gulden' and 'crowns' (five shilling pieces) are not minted at all nowadays. As soon as our task of keeping accounts or measuring values can be carried on with as great an ease as is possible, it does not matter whether we keep metallic coins in our pockets or in coffer and vaults of banks or leave the money metals in the mines themselves. The task of facilitating exchange is a secondary one and can be performed by any kind of medium, material or non-material, provided general acceptability has been accorded to it for the purpose of measuring values.

Take, for instance, my own case. I do not get silver rupees from the Punjab University nor even a cheque. The knowledge

¹⁷ Seligman, Principles, p. 451. Longmans, 1928 edition.

that the university authorises the bank on the 1st of every month to pay me so much on demand is quite enough to satisfy me. The cheque drawn by the University is sent directly to the bank. Similarly, if I get goods and services from shopkeepers and servants and give them an assurance, as the university does in my case, that I will authorise the bank to debit me for such and such an amount and credit them for it, there would not be the slightest difference between this position and the one existing now when I buy goods and services with the help of hard cash (or liquid funds). And this process can be increased *ad infinitum*. In all such cases money, though not existing physically, yet is doing its primary work of measuring values. True that this implies a great trust. But so do all businesses. To say that on account of mistrust 'money' must assume a physical form is to confess that physical forms of money are simply relics of those barbaric times when mistrust ruled supreme. It is wrongly supposed that gold or silver coins used in a country serve as indices of civilization and prosperity. They do nothing of the kind; and if the sense of responsibility and trust have anything to do with civilization and prosperity, the smooth working of economic organisation without the help of physical money would certainly indicate the approach of highest civilization.

This discovery may be regarded as the highest perfection in monetary theory. What is the use of spending so much of human energy and other productive resources of the world in giving a physical shape to money when the same work can be done with an imaginary thing. In Algebra we calculate quantities in terms of a , b , c ; in Trigonometry we use thetas (θ) and phies (ϕ), etc. Similarly, we can measure values in terms of any imaginary unit. So long as the unit of account is common and popular, it matters little whether it is material or non-material, the difficulty of barter is not likely to reappear. If ever value comes to be measured in that way, it would not be the only phenomenon of its kind. There are many things in the world such as 'temperature,' 'rain,' 'motive power,' 'air and blood pressures,' and consumption of

electric current, etc., which are measured in terms of units which it is not so easy to define. Indeed, even the units of weights and space also are purely conventional. Nobody thinks of insisting that, e.g., his cloth should be measured by a yard stick made of this or that metal or substance. And there is no reason why the yard stick for measuring value should be made of silver or gold or of any other particular thing.

The most central principle of Economics is the getting of maximum enjoyment at minimum cost. Therefore the less your money costs to make, the more sound that position would be from the economic point of view; and the more costly the money to make is, the less economic it must be. The greater the metallic money in use the smaller the instruments of credit; and in such a case the likelihood is that the expansion of trade will be retarded. But against that a very strong objection is urged. It is that if the obligation to pay cash is removed from among the responsibilities of banks, etc., then the dangers of inflation will increase as there will be nothing to prevent the banks and other lending institutions to expand their credit indefinitely; and the value of money will be most unstable. As it is, inflation tends to be most rampant in a country where inconvertible paper money is issued. And if the unit of account becomes altogether intangible, the control and management of currency affairs will be most difficult. This objection is based on a misunderstanding. If in a distant future such an ideal state of affairs becomes a reality, then the nature of banks will also be entirely changed. They will simply become the registrars of accounts of the business community or society in general. This will not be communism as some timid people might think. We shall not begin to study the needs of every individual and give him goods and services accordingly. We shall not begin to dictate what he shall produce and what he shall and shall not do. People will continue to produce what they like and reap the reward according to merit. Goods and services will be produced and exchanged as usual. Banks will lend their book credit as they do now. The basis of their lendings will be their claims on the

goods and services of others who can neither utilise these themselves nor can find those who can, and therefore entrust the banks to find them. Substantially this is the position of banks even today. They have, among their assets, shares, stocks, bonds and securities of different companies and of government. They have property in goods. They have their goodwill and a very little amount of cash. So long as they are satisfied and confident that their assets, tangible and intangible, are in such a state as to enable them to meet all their obligations within a reasonable time, they have nothing to fear. This position will not be changed even when that small amount of cash is replaced by other intangible assets. It is the confidence and trust which is, at bottom, the basis of all businesses including that of banks. Let this confidence and trust extend a little more and we can take the final plunge. But this extension leading to final disappearance of physical forms of money is neither likely to be realised in the near future nor it is so easy. Greatest possible care is necessary. The credit machinery is already so delicate and fine, that a little shock has often wrought havoc with it. It may take centuries for humanity to educate itself to such a high degree as to enable this consummation to materialise. Here I have only endeavoured to show the direction in which the world is moving. So far as the subsidiary coins of small denominations are concerned, probably the stage will never come when we could dispense with them. The question of stability of value of money, however, will be dealt with at a later stage in this paper.

4. Importance of Money.

The fact, that in deciding the true nature of money, attention is now fixed on the function of measuring values, has given rise to another very important result. In the pre-war period the textbook writers confined and contented themselves with showing the usefulness and importance of money in connection with the department of Economics, known as 'Value and Exchange.'

They finished by pointing out the difficulties of barter. But now it is realised how the money measurement of values serves the consumer in distributing his expenses over different things, how it helps in saving and lending and creation of capital and how it encourages specialisation or division of labour; how it gives a more definite shape to a man's income which is very necessary for understanding and improving his relative position as compared to his co-workers and masters. Similarly, the significance of money measurement in the department of Public Finance is no less great. As every beginner knows well, monetary calculations make for certainty in budgeting and in taxation and eliminate the possibility of arbitrary exactions. And most significant of all is a recent tendency of the writers attaching great significance to the changes in monetary scale of valuation as a factor in bringing about economic booms or in preventing and alleviating economic depressions which so often lead to important economic consequence for humanity.¹⁸

Thus money measurement has pervaded all the departments of Economics and is no longer confined to 'Value and Exchange' only. We now describe our present economic order as based on 'Money economy.'¹⁹

We can therefore rightly say with the Urdu Poet

پیسہ ہی رنگ روپ ہے پیسہ ہی مال ہے
پیسہ نہ ہو تو آدمی چرخے کی مال ہے

and again

کوڑی کے سارے جہاں میں نقش و نگین ہیں
کوڑی نہ ہو تو کوڑی کے پھرتیں تین ہیں

18 (A) Keynes, *A Treatise*. Vol. I, pp. 262—75, First Edition. Macmillans

(B) Pigou, *Industrial Fluctuations*, pp. 99—106, 210—19, 251—305.

19 See the importance of money as discussed in the current literature from—

(a) Robertson's *Money*, pp. 4—16, Cambridge University Press, 1923 edition

(b) Foster and Catchings, *Money*, pp. 1—14 and also 250—297.

(c) Keynes, *A Treatise*, pp. 1—73, Macmillans, 1924 reprinted,

But let not this mislead anybody into thinking that money is an all-important phenomenon for the prosperity of humanity. Useful goods and services are of far greater importance than money. And ultimately it is the satisfaction of man which is of the utmost importance in all economic matters. Money after all measures values of goods and services and pretends to measure man's satisfaction. The measure cannot in any case be more important than the thing measured.

5. Functions of Money.

A general tendency is now growing to omit the discussion of functions of money from the text books. This tendency is not sufficiently noticed and I cannot say whether it is deliberate. But its existence cannot be doubted. No formal discussion of functions of money appears in any of the standard works on the subject recently published.²⁰ But this tendency is not unwelcome. After all what used to be said on the subject before, was at least superfluous if not irrelevant. Some of the so-called functions were nothing but a different way of putting the same thing, viz., that money measures values. Some others were obvious corollaries of this and at least one was positively absurd. Let us first see what these were.

- (1) Money serves as the measurement or standard or common denominator of values
 - (2) Money facilitates exchange
 - (3) Money serves as the standard of deferred payments
 - (4) Money serves as a final discharge of debts
 - (5) Money serves to transfer value
 - (6) Money is the store of value
- and so on and so forth.²¹

²⁰ For instance, Cannan, Keynes, Foster and Catchings, Robertson, Lehfeldt, etc., have no chapter in their books dealing with functions of money.

²¹ For an elaborate account of these see (a) Anderson, *Value of Money*, pp. 417—58, Macmillans, 1917 ed. (b) Kinley, *Money*, pp. 55—77, 260—91,

We have seen above that money facilitates exchange because it measures values. This is the case with numbers 3, 4 and 5 also. The sixth is unmitigated nonsense. Value which is only a particular kind of relation between any two things cannot be stored at all.

We pointed out above the undesirability of employing the phrase 'general purchasing power' in scientific discussions, and saw its misleading nature. To say that 'value' in general can be stored by money, or for the matter of that, by anything in the world is to show one's ignorance of the nature of value. If money can store value it would be equally true to say that a university certificate stores knowledge, that a thermometer stores heat, that an iron rod called a yard stick stores space or cloth or anything which it measures. Money simply measures value and as a thermometer cannot be heat which it measures, as a university certificate cannot itself be knowledge, etc., so also money cannot be a store of value. The measure cannot become the thing measured.

6. Conclusion.

(1) We have seen that money cannot be defined except with the help of citing one of its functions as differentia. Not only money but there are thousand and one things in the world of which we have fairly good idea and with which we are quite familiar as they are articles of daily use and yet they baffle all our efforts at defining. For instance, what more can one say in regard to the definition of a table beyond the fact that it is a piece of furniture. That is its genus. But what about its differentia? There is no reason, however, why we should hesitate to include one of the functions of money as its differentia in its definition. This could not invalidate it. A function peculiar to money is as good a differentia as any other could be. Money therefore could be best defined as an instrumental good used to measure values of all economic goods other than itself.

(2) This definition has put under shade the *True* which had become so popular before the war, viz., that it is a medium of exchange. This is so because the 'medium of exchange' function is not peculiar to money and the inclusion of this in the definition would make it so wide as to include the instruments of credit also in the category of money. Money measures value of all things including that of the instruments of credit. But the latter could not do that as their own existence requires some unit of account to be agreed upon universally.

(3) It is not absolutely necessary that money be made of gold or silver or any other substance. A conventional unit can do the work equally well. But having regard to the enormous ignorance existing in the world today it does not seem, probably even for centuries to come, that we shall do away with physical forms of money. Although there is an unmistakable tendency towards spiritualising our money altogether yet perhaps the stage will never come when we could dispense with the subsidiary coins of small denominations also.

(4) Although the general tendency is to regard 'money' as a term of wider denotation than the term 'currency' yet it would perhaps be more logical to reverse the order. The instruments of credit also 'run' within their limited sphere and they are in this respect not fundamentally different from 'money.' They must therefore be regarded as 'currency.' But they cannot measure value and therefore could not be money.

(5) The concepts of money, viz., (a) that it is a means of discharging debts, (b) that it is a means of payment and (c) that it is a claim on the products of society are seen to be not ultimately different from the conception of measurement of value. But the phrase that 'money' is general purchasing power is misleading and metaphorical. And the phrase 'Intrinsic Value' which used to be employed so often in monetary contexts is seen to be useless.

(6) Now that the true nature of money as the measurement of value has become clear, the importance of money is seen to be

not confined to the department of Economics known as ' Value and Exchange ' but pervading the whole economic structure of the society. And yet money is not an all-important economic phenomenon. It is only a measure and cannot be more important than that what it measures, i.e., values of goods and services and the satisfaction of man.

(7) The discussion of functions of money is now fast disappearing from the text books. To say that money is a ' store of value ' is absurd.

INFLATION AND PUBLIC WORKS AS A MEANS TO PROSPERITY

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SUMMARY

An attempt has been made in this paper to discuss the advantages as well as the limitations attending on the execution of public works by Governments in a period of depression. The situation in Britain and the United States of America is noticed and the logical finish of Roosevelt's technique of Inflation is emphasized. It is pointed out that "if at one stage of the cycle, the world spends freely in a manner which in an individual, would be ruinous, it may so stimulate trade that it puts down the commodity value of its currencies." Inflation and Public Works are emphasized as a means, not of absorbing all the unemployed (which is absurd), but of starting the trade cycle on its onward march. Indian financial policy, it is emphasized, must reverse its nature, and exploit the easy money conditions in the money market by the execution of well-planned public works immediately.

In recent discussions of measures to overcome the depression, the inauguration and execution of public works has assumed considerable importance. Especially after the accession of Mr. Roosevelt to power in the United States of America, the programme of economic recovery, designed to raise the level of prices by inflation has included, as an important item, schemes of public works. The construction of works of public utility is, no longer,

the nostrum of quacks, but is accepted as a scientific remedy for economic ills. The monetary implications of such public works, the difficulties that attend on, and the problems that arise out of the execution of such public works, have bulked large in recent economic literature, especially since the publication of Dr. Keynes' pamphlet "Means to Prosperity."

Inflation of currency alone would not be adequate to overcome the present crisis. There must be inflation of credit, on a sufficiently large scale, but even such inflation, to be fruitful, should include, within its technique, the starting of public works by Governments, for cheap money is not enough in itself, and the demand for money must come from governments in the first instance, so that, thereafter, willingness both to lend and to borrow might simultaneously increase amongst the public.

That such public works should be financed by bank credit rather than by additional taxation has been insisted upon by a number of speakers who participated in the discussion of Mr. R. G. Hawtrey's paper on "Public Expenditure and the Depression." In fact the psychological effects of public works, financed by additional tax revenue, would be fundamentally different from those produced by public works financed by inflation of bank credit. In the first case, diffidence would be augmented largely; while in the latter case, the necessary confidence for overcoming the crisis would be conjured up. It is true, that without resorting to additional taxation, savings in public expenditure, effected by conversion operations, might be used for financing such works: Australia, after 1930, has embarked upon the carrying out of such works by improvement in public credit effected by such conversion operations. But the weapon of conversion is, at best, a fiscal device for securing budgetary equilibrium and the very success of conversion operations on a large scale in various countries, such as Australia, the United States of America and Britain, has contributed to an excess of idle funds, unable to obtain remunerative employment. Conversions on a large scale indicate at once the amount of unemployed capital and the intensity of the

present depression. Money market conditions in India too reflect the gravity of the crisis, though some part of the excess funds, seeking investment, is due to the heavy shipments of gold from India.

One of the arguments for Government undertaking public works during a period of depression is that the idle balances of money which have led to reduction in the rates of interest on deposits offered by banks all the world over might be persuaded to come out by the attractive offer of new issues of securities. Dr. Keynes has urged in his 'Means to Prosperity' that Britain, which successfully embarked on conversion operations last year, should this year float new industrial securities, taking advantage of what he has called the deadlock in the money market, and thus increase employment and consumer income.

Sir Basil Blackett (in the course of discussion on Mr. Hawtrey's paper on *Public Expenditure and Trade Depression*) has indicated that he attaches, like the man-in-the street, special significance to the extension of Government enterprise as the one means of restarting the ball of business rolling and has emphasized that a mere creation of credit facilities in the absence of the necessary confidence to take advantage of the same would be superfluous or inadequate.

The problem, however, of starting and working public works in a country like England bristles with difficulties both theoretical and practical. The capital programme, necessarily suffers from the rather serious disadvantages of coming into operation slowly if the public works started have been carefully thought out. To produce the required psychological effect, public work schemes must come into operation on a large scale and in a substantial manner. Further, the starting of certain kinds of public works like roads, drainage and electricity schemes would raise far-reaching and fresh practical problems. We are told (Sykes: *British Public Expenditure*) that continuous expenditure on roads might make road transport services become privileged and subsidised services unlike railways which are called upon both to construct and maintain their track themselves, and that such expenditure might aggravate the

difficulties of railways still further. Similarly, we are told that state expenditure on land, drainage and water-supply schemes might be criticised by manufacturing interests in England on the ground that such expenditure would be equivalent to agricultural interests. Some economists have pointed out, that such public works, may merely be a check on private enterprise. We need only notice here, that competition for credit accommodation is keener when business is good than when it is bad, and that naturally, the same amount of public loans would displace a smaller amount of private issues during a period of depression than during a period of prosperity.

We are also told, that public works embarked upon are able to absorb only a small percentage of the unemployed, that their cost is very high on account of comparatively less efficient workers being employed, that they demoralize the workers by paying them wages higher than those they have earned. Mr. George Bilschowsky is also of the opinion that an extension or contraction of public works exercised a direct influence only on the construction industries, and the amount of employment found in them is small: other industries will have to content themselves with whatever stabilizing influence is exercised by the orders for materials received from the construction industry, and by the increased purchasing power of workers engaged in the building industry.

Some of these theoretical and practical difficulties should not be a bar to the actual carrying out of schemes of public works. In a country like England, there may be some special or temporary difficulties created partly by the age-long tradition against state-works and the historic tradition in favour of private enterprise. British state works have not been uniformly satisfactory (*vide* Dr. Gregory's evidence before the Macmillan Committee) possibly because, in years past, the efficiency of labour employed has not been of the highest order, as local authorities have had to recruit, in the first instance, men of varied types and capacity, "ex-service men," and "transferred labour." Further, the existence of social services, even during the depression period, by providing alter-

native grants, without exacting, *quid pro quo* in direct effort, has detracted from zeal in, and willingness to work. But just at present, there is a distressingly large amount of unemployment, including a large volume of skilled labour. There is, therefore, no danger of inefficient or unsuitable labour being engaged on state works in any important country.

Further, expenditure on such public works as electricity, gas, water, roads, etc., besides being economically profitable, would also incidentally reduce the general cost of production for private firms. The chief argument in favour of state works from the broad point of human welfare, is that they provide the only satisfactory corrective to the inevitable deterioration in the skill and willingness to work created by prolonged unemployment.

But for such public works, the resources used therefor would not be drawn upon, but would remain unused.

In countries, particularly like India, where the tradition of paternal government is strong, and where the public have long been familiar with state enterprise and benevolence, the public would readily welcome any state plan of public works. There are always enterprising businessmen, and the number of such businessmen would increase in all countries as a result of Government's far-reaching schemes of public works.

One of the questions that arises in connection with public works is the rate of wages that will have to prevail and the conditions of service in such works. It is almost a principle that the rate of wages, should not be too high, lest private manufacturers should be inconvenienced. There is not the likelihood of wages rising because of the inauguration of public works, since the existing volume of unemployment is deplorably large, and, at a time of considerable unemployment, wages would not rise.

The question, whether only a nominal wage should be given by the Executive in the execution of such works, has been sometimes debated. It has been pointed out, that in public works, undertaken in a depression period when buying power is low, the cost of production of utilities should be low. It must be remem-

bered, however, that the wages paid should not be so low as to demoralize the worker.

In the public works recently started in the United States of America the scale of wages is very high, hence it is part of the economic policy of Mr. Roosevelt to raise consuming power for purchasing the increased output of factories, both private and Government, by increasing the general wage-level throughout the country. The internal market is of considerable importance to her. A rise in the internal price-level, bringing in its train the stimulus of larger demand, and lowered costs of production arising from reduction in the burden of internal indebtedness would be compensation enough for the "Blanket Code," which has been imposed on the manufacturer by Mr. Roosevelt.

The scheme of public works in the United States of America is to be associated, ultimately, with the depreciation of the internal currency unit. When, as a result of increased bank credit, there is a rise in the internal price-level that would attract additional funds, this, in turn, would necessitate further currency depreciation to maintain equilibrium in the balance of payments ultimately.

Further, such works have been facilitated by some of the provisions of the Banking Act of 1933, which have increased the velocity of circulation of money in the country. The inflation policy of Roosevelt is calculated to increase both quantity and velocity of circulation of credit in the country. The prohibition of the payment of interest (*vide* Monthly Letter of the National Bank of New York City, July 1933) by member banks on demand deposits may induce many banks or industrial corporations which have been accustomed "to carry large cash balances, in money centres, to shift a portion of their funds, into United States Government Securities." United States of America, just at present, possesses certain advantages not found in all countries for embarking on a scheme of public works. The compilation and maintenance of economic statistics is one of the most advanced in the world; so that it would be possible to regulate bank credit up to a

certain amount, i.e., till prices reach the level of 1926. Further, the recent mortality among many of the banks in that country has undermined public confidence in the banking structure of the country, so that the people are in a mood to subscribe to public issues of Governments. We have a disciplined and educated people, ready to appreciate the significance of Mr. Roosevelt's work. The administration possesses adequate dictatorial powers. The vast numbers of the unemployed in the country are ready to snatch any opportunity that would absorb more of them into the labour force of the country. Hitherto, one of the obstacles to inflation has been the hostility of the workers, for inflation alone would mean a fall in their real wages. But contradictory and hostile as it might seem to the whole American technique of inflation, financing a vast scheme of public works, the policy of wage-raising embodied in the "Blanket Code," is nevertheless an indispensable and centralizing factor, in his general policy of inflation. It would automatically provide a method of controlling such inflation. The device of inflation would safeguard the interests of the manufacturer by giving him the stimulus of increased demand thereby increasing his profits, compensating him for the loss involved, in paying higher wages, to the labourers engaged. Thus the two parts of Mr. Roosevelt's policy make a harmonious whole. In the first instance it might appear that an increase in the amount of wages paid might augment the potential purchasing power of the wage-earners and lead to more sales of agricultural produce and manufactured commodities. This, however, is conditional on the recipients having the will to spend their wages in additional purchase, and, at present, "the tendency seems to be, for those who have become involved in debt, to use their recently raised wages to discharge their debts." An honest wage-earner naturally thinks of wiping off his debts before making fresh purchases of commodities. It must be admitted that the response to the "Blanket Code" has been by no means uniform, because the incidence of the "Blanket Code" is not quite equal. "Those industries, which are largely mechanized or which

employ little unskilled labour have accepted it; but industries which have been characterized by low wages and long hours are in a quandry. (Vide *Economist*, dated 12th August, 1933.)

The compensating elements in Roosevelt's policy should be noticed; otherwise, we might carry the impression that a number of mischievous consequences would result from federal borrowing of bank credit and federal execution of public works. For the present Roosevelt is too much occupied in enforcing the minimum wage legislation. He does this by way of taking abundant precaution against some of the inevitable mischievous results of inflation and public works. The pill of inflation has become sugar-coated so that it might be more easily swallowed by the general public. The momentum for industrial recovery would have to be given, not by the mere political fiat of the Administration, but by the actual federal planning and execution of public works. Particular care is taken to ensure that low wages do not prevail in state works. It need not be elaborated that even if Government authorities overcome all the obstacles and avoid all the dangers that we have noticed, there would be one danger left—the sinister influence of politicians. Mr. George Bielschowsky rightly emphasises, “the greater the stability, efficiency and integrity of Governments, national and local, directing the planning and execution of public works, the smaller the political and economic difficulties, involved in the scheme, would be.” The idle bank balances, clamouring for investment, coupled with the accumulations of post office cash certificates (*vide* the Budget Statement of 1933-34) partly due to exports of gold out of our country should be an auspicious occasion for a capital programme of public works, rather than the present financial policy of reduction of capital programme of the Government of India for the purpose of maintaining its budgetary equilibrium to which undue importance has been attached rather strangely. We need hardly reiterate that careful correlation of schemes is, in the first instance, a condition precedent to the actual execution of a capital programme in our country. At the same time, to produce the required psychological

effect, public works schemes must come into operation on a large scale and in a substantial manner. Public works, inaugurated in a country like India, must be on a generous scale and not confined to particular parts of the country, for there is always a quantitative limitation of public works as a stabilizer of industrial condition, public works exercise a direct and beneficial influence on conditions of employment, only in the places where they are undertaken. Mr. Roosevelt's experiment must be a clarion call to our own country and must lead to a change of policy on the part of the Finance Department of the Government. The present financial policy of Britain is no guide for us, in this matter. Even in England, there is a growing volume of opinion that the policy of inactivity pursued by Mr. Runciman is hardly satisfactory (*vide* the Symposium on the Housing Question in Britain in which a number of experts have stressed the necessity for going ahead immediately with the policy formulated in 1921 and suspended by the depression).

Conclusion.

Never was the need for economic planning of public works so urgent or necessary as in India at the present time. There are still vast regions devoid of proper communications and adequate organizations are required to promote the health and economic efficiency of India. It may be readily conceded that India is not so advantageously placed as the United States of America for the Administration to embark upon a scheme of public works financed by inflation of bank credit. But the universal phenomenon of cheap money, on the one hand and diffidence amongst the general public, on the other hand, call for a bold capital programme by both the Government of India and Provincial Governments. In the next budget, though it might be considered a heresy to make this suggestion, an ambitious capital programme must be inaugurated by the Government of India and, for this purpose, a census of economic statistics would be a valuable preliminary step.



POPULATION AND EMPLOYMENT

BY

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In recent discussions on the population problem of India the aspect that has received attention is the ability of the country to support the population. This is no doubt important. But equally important is the question of employment. On it depends both the production of wealth and its proper distribution. Difficulties of employment would thus affect the country's ability to support the population, and any enquiry which excludes this consideration will be, to that extent, incomplete. In this paper an attempt is made to examine the employment situation with reference to growth of population.

There is a view held in some quarters that there is hardly any connection between population and unemployment. Thus Sir William Beveridge in his Presidential Address to the British Association, 1923, said, "It is very doubtful if excessive population has ever shown itself or would naturally show itself by causing unemployment."¹ As against this view we have the opinion of Mr. D. H. Robertson who said, "I should not go so far as to say that pressure of population might not manifest itself in the form of unemployment."² Again referring to post-war Austria and the destruction of its 'Economic Conjunction' he said, "And when this occurs the pressure of population is likely to manifest itself not merely in a degradation of standards but in the emergence of an absolute surplus for whom it is literally

¹ The Economic Journal, December 1923, p. 448.

² The Economica, No. 9, p. 203.

impossible to find useful work.”³ It is not quite certain whether Mr. Robertson is speaking from the long or the short period point of view. As for Sir William it is clear that he has the long period in mind, for a little later in his address he admits that temporary difficulties of employment might arise. “If all the hundred million persons who now find room and growing opportunities in the United States had landed there at once, they would all have starved.”⁴ But he is emphatic in saying that a temporary difficulty of absorbing a new flood of labour does not prove permanent over-population. Since Mr. Robertson has not qualified his statement we have to understand that his view regarding the long period is different from Sir William’s. Their agreement as regards the short period places the matter beyond controversy. But once it is admitted that short period unemployment may be caused by an excessive growth of population, we have also to admit that its disappearance in the long run will depend on circumstances. The absence of favourable circumstances may so elongate the short period that it would be hardly right to call it the short period at all. This is likely to happen when the ability to accumulate capital is damaged by the existence of the unemployed. In poor countries where the national income is none too big an increase of dependents would bring about that result. Even rich countries with a rising standard of life may find their ability considerably reduced if a scheme of unemployment insurance is made effective.

At any rate short period difficulties of employment are as alarming in real life as long period difficulties, and the question whether a growth of population has caused, or is likely to cause unemployment is one that should be considered whenever the population problem of a country is discussed. Not all increases of population would cause unemployment, nor is all unemployment caused by population. Therefore it is necessary to set out the

³ The *Economica*, No. 9, p. 204.

⁴ The *Economic Journal*, December 1923, pp. 466, 467.

relation between population and unemployment for the purpose of reviewing the Indian problem.

L. V. Birck, the Danish economist, has shown that under capitalistic production labour employment is conditioned by the existence of the necessary capital.⁵ The adage that with every mouth God sends a pair of hands is true enough, but that the hands bring with them the tools and the appliances with which to exploit the natural resources is not so certain. And the tools that are appropriate to the standard of the arts are as necessary for production as the hands which are to wield them. In a highly industrialized country, therefore, rapid increases of population unaccompanied by a proportionate accumulation of capital will result in unemployment. This is not so inevitable as it first appears to be. By descending to a lower technique the capital in existence and the men seeking employment can be equated. But this course, it will be evident on reflection, is not immediately available. It is clearly ruled out as regards those appliances which have already been constructed and are being worked, and certain considerations go to show that even the new machines intended to replace the old or to serve as additions are not likely to be of simpler construction. Decisions regarding replacement and expansion are in the hands of entrepreneurs, and they are by nature not inclined to give the same attention to labour needs as to profit-making possibilities. A lower technique damages productivity, increases cost per unit and reduces profits. In certain respects a substitution of capital by labour may appear to be profitable. Periods of unemployment are, undoubtedly, periods of low wages, except when they are artificially propped up, and the time may seem propitious for a replacement of capital by labour. But such realization on their part would induce them to act accordingly only when they are satisfied that the fall in wages is likely to be permanent. This is so hard to decide, and it may seem to them that their safest

⁵ *Vide Theories of Overproduction. The Economic Journal, March 1927.*

course lay in inaction. Thus it comes about that when the accumulation of capital lags behind the increase of population a severe and fairly long period of unemployment emerges. The rigidity of the technical structure is its cause, but its continuance proceeds from the clash of interests as between labour and capital, and the concentration of power in capitalist hands. It would be otherwise if labour owned the instruments of production, or if the productive technique were less roundabout. In the first case employment giving possibility of technique would weigh in the selection, and those combinations of the factors would be chosen as would give labour scope for employment. The tenacity with which Indian agriculturists and handicraftsmen stick to their traditional methods would seem to be not so much due to ignorance as to the realization of this truth. They are unconsciously wise even as the Chartists of England were wise in smashing down machinery. In the second case little capital being used little need be accumulated to employ an increased labour. It is also possible under the conditions postulated to effect a redistribution of resources whenever there is the necessity to give employment to an increase in the working population. Thus, for instance, in Indian agriculture the pressure of population reduces the area of land at the disposal of each worker by cutting up holdings into smaller and smaller units.

In giving employment to an increase of population the backward agricultural countries would seem to have a greater power of adaptation. So Mr. Robertson, "Where (as in India and China) the structure of society is simple and the standard of life capable of infinite degradation without destruction of the social order, such a result (unemployment) is not to be expected."⁶ True in general terms, this conclusion overlooks the fact that under-employment is only unemployment in disguise, and further, that absolute limits to the re-distribution of resource will begin to operate as soon as population has become dense enough. Where productive methods

⁶ *Economica*, No. 9, A Word for the Devil, p. 2.

are primitive and consist in drawing sustenance from land, natural resources would be the limiting factor.

This analysis leads one to the inevitable conclusion that all increases of population would not find useful employment. Indeed there are occasions when the probability is that this will happen. A rapid increase of the working population is such an occasion. When repatriation of a country's emigrees takes place, or the normal channels of migration are closed, the addition to the working population will be very marked. Some emigrations are purely adult male emigrations, as for instance, the Madras emigration to Malaya. Even in other cases the adult male predominates. The slower process of births and deaths may create a similar situation. A fall in the death rate since it benefits the workers more than the non-workers should be expected to cause a rapid increase in the working population. A third case is that of an abnormal increase in population following a period of labour scarcity and much replacement of labour by capital. There, the higher technique though it means a heightened productivity and an ability to support an increased population would at the same time reduce the scope for employment. Destruction of a country's 'Economic Conjunction' may also in some cases create a surplus of workers. In all these cases from the employment point of view there will be overpopulation. The concept of the optimum would then seem to need a revision. The population that can be supported if it does not mean at the same time full employment for the working population is hardly an optimum.

The causes that tend to rapidly increase the working population have most of them been in operation in India during the decade 1921—31. The control exercised over emigration by the Indian Emigration Act of 1922 has virtually prevented the migration of unskilled workers except to places approved by the Governor-General. That this has been an effective check on emigration will be realized when it is remembered that in the past the bulk of the emigrants was unskilled workers. The anti-Indian feeling in South

Africa and Burma has also contributed to the fall in emigration. From those places as well as from Malaya and Ceylon repatriation has actually begun. In addition to this there has been an abnormal fall in the death rate. The index number of the death rate in India prepared by Prof. Findlay Shirras shows an abnormally low rate for the years 1922 to 1931.⁷ The fall has been rather sudden. From 109 in 1921 it fell to 86 in 1922 and thereafter has been fluctuating between 86 and 96 with the exception of 1924 when it was 102. For all years between 1889 and 1921 the index is well over 100, the exceptions being 1893 and 1898. Thirdly, there has been an unusual increase in total population. The 10.5 per cent increase during the last decade is higher than the increase in the three previous decades. The influenza epidemic of 1918 and 1919 mostly accounts for this, just as the famine of 1880 accounted for the 13.2 per cent increase in 1881—1891. The peculiar feature of this increase is that it did not affect all age-groups in the same manner. The highest percentage increase of 15.1 we find in age-group 15—40, followed by 14.5 in age group 0—10 and 10.6 in age group 10—15. Persons above 60 have decreased by 14.9 per cent. The following table shows the percentage variation of population by age groups during the last fifty years.

Decade.	All ages	0 - 10	10—15	15 - 40	40—60	60 and above.
1881—1891	+ 11.2	+ 16.1	+ 4.3	+ 10.8	+ 9.7	+ 8.0
1891—1901	+ 1.8	- 5.1	+ 14.5	+ 2.3	+ 5.2	+ 0.3
1901—1911	+ 6.6	+ 9.7	- 1.7	+ 7.3	+ 5.1	+ 8.6
1911—1921	+ 0.9	+ 0.1	+ 8.5	- 1.0	+ 1.1	+ 3.1
1921—1931	+ 10.9	+ 14.5	+ 10.6	+ 15.1	+ 3.1	- 14.9

⁷ The Population Problem in India, *The Economic Journal*, March 1933, p. 73.

It will be seen from this table that in no other decade during the past fifty years has the increase in the working population been so well marked. All the causes enumerated above have contributed to this result, and considering the age composition of the present population it is to be expected that the next decade will exhibit the same tendency.

Now, this increase in the workers has been after a period of labour scarcity brought about by the influenza epidemic. According to certain estimates the total number of deaths caused by that epidemic was between 12 and 13 million.⁸ A considerable part of it was, no doubt, workers. This is indicated by the census figures of 1921. That census recorded a decrease of one per cent in age group 15—40 and an increase of only 1.1 per cent in the group 40—60. This is a clear proof of the havoc wrought by the malady among the workers. The prevalence of high wages during the period immediately following and its continuance even after prices had begun to fall is yet another indication of the scarcity of labour. What we ought to expect in a period of such scarcity is a replacement of labour by capital. Whether that actually took place is difficult to discover. A suggestion to that effect we have in the figures relating to the imports of machinery and mill work into India. The following table shows the variation in imports from 1918 to 1925.⁹

	1918—19	1919—20	1920—21	1921—22	1922—23	1923—24	1924—25
Machinery and Mill Work	59	901	2287	8425	2346	1913	1474

(In Lakhs of Rupees.)

⁸ Prof. Findlay Shirras, *The Economic Journal*, March 1933, p. 60.

⁹ Statistical Abstract for British India.

It is significant that in three years between 1918 and 1922 the imports should have expanded so considerably as to have become in 1921—22 58 times that of 1918—19. During the six years from 1918 to 1925 nearly 123 crores worth of machinery was imported into India. This phenomenal increase in imports cannot be wholly accounted for by the rise in prices. The introduction of discriminative protection following the report of the Fiscal Commission was, however, a major cause. Whatever might have been the factors in operation the net result was the development of industrial technique in an upward direction. Industrial expansion, undoubtedly, took place, but that was accompanied by a raising of the stage of the arts. This conclusion is corroborated by an examination of the figures relating to actual workers in industry and transport. The 1931 Census of Occupations shows that the addition to the workers engaged in industry and transport was less than one-half of one million during the decade. That such abnormal imports of machinery should have resulted in creating additional employment only to half a million workers is clear evidence of the fact that the place of labour was being taken by capital.

Reviewing the decade 1921—31, we find that that decade was one of disproportionate increase in the working population at a time when the industrial technique was undergoing a rapid change in an upward direction. In the circumstances at the present moment and for some time in the future employment difficulties should be expected.

Whether there is at present actual unemployment or not is a question that cannot easily be answered. No attempt has been made to take a census, and it is very doubtful if the real state could be discovered by such an enquiry. With 71 per cent of the population dependent on agriculture and a large majority of the workers employed there, it will be difficult to find out who the unemployed are. In a country of small holdings unemployment as such will not be seen, but only under-employment. Among the

landless agricultural labourers as well as among the workers in industry and transport unemployment is hidden by the practice of casual employment. In the absence of any statistics, we have to fall back on other devices to make an estimate of the unemployed in India. Our task will be greatly facilitated if we can make an estimate of the employables. Women workers have to be excluded for various reasons.

On the assumption that the working age in India is between 12 and 60, male workers form 63 per cent of the total males. In absolute numbers they are 113·5 million. Deductions have to be made from this number in respect of the infirm, the school-going and the retired. The blind, the deaf-mute, the insane and the lepers among males of working age number less than half a million, and if another million is allowed for other diseases which permanently disable workers, the total allowance for the infirm need be only 1·5 million. The retired would hardly be more than a million, for the total number of males aged between 55 and 60 is only 4 million, and not more than 25 per cent could be expected to retire from work in their 55th year. A provision of 3 million for the school-going population aged 12 and above should be generous. The total deductions, thus, amount to 5·5 million leaving a remainder of 108 million as the male employables in India. This is 60 per cent of the total males. The estimate of employables and the number returned by the census of 1931 as actually employed are identical in Madras, both being 13·8 million. This goes to show the substantial accuracy of the estimate. Such identity is lacking in the Indian figures. The number returned as actual workers is only 105 million, whereas the estimate of employables is 108. The return includes both earners and working dependents so that the whole of the working age is covered by it. The surplus of 3 million not accounted for, is suggestive. If our estimate is correct, the only inference that can be drawn is that they are unemployed. Another comparison confirms this conclusion. The number of actual workers in 1921 according to the census return

was 100 million and the 1931 census shows an increase of 5 million. It is inconceivable that this has been the only increase in male employables. The five per cent increase here is out of harmony with the average rate of increase of 9·6 per cent in age groups 10 to 60.

This figure of 3 million does not exhaust the unemployed in India. The probability is that some who have been returned as workers are really unemployed. There are two occupations included in the return which are not occupations properly so called, viz., insufficiently described indicating no definite occupation and unspecified labourers and workmen. Unemployed persons are likely to give just these descriptions of their occupations when questioned by the census enumerators. It seems to me that they should be treated as really unemployed. In that case the figure of 3 million should be increased by 8·2 million returned under these two heads, making a total of 11·2 million. The decade 1921—31 witnessed an increase of 1·9 million under these two heads, an increase which is out of all proportion to the increases in the other occupations. The table below shows the actual male workers in the different occupations in 1921 and 1931 with the variation during the decade.

No.	Occupation.	Actual Workers 1921	Actual Workers 1931	Variation.
1	Production of Raw Material ..	72'33	74'70	+ 2'37
(a)	Pasture and agriculture ...	71'52	73'76	+ 2'24
(a 1)	Cultivation ..	68'14	69'61	+ 1'47
2	Industry ...	10'68	10'79	+ 0'11
3	Trade ..	5'57	5'78	+ 0'21
4	Transport ..	1'76	2'09	+ 0'33
5	Administration ..	3'66	3'78	+ 0'12
6	Miscellaneous ...	6'58	7'91	+ 1'33
(a)	Insufficiently described ..	3'57	4'59	+ 1'02
(b)	Unspecified labours and workmen.	2'89	3'75	+ 0'86
(c)	Domestic Service ...	1'71	2'09	+ 0'38
(d)	Persons living on income ...	0'13	0'16	+ 0'03
(e)	Unproductive ...	1'16	1'05	- 0'11

(In Millions)

It is significant as revealing the employment position in India that of the addition to the workers during the decade only 3·2 million have been absorbed by all the other occupations put together. The increase under these two heads is a clear evidence of the difficulty to secure useful employment.

If the employment position is difficult at the present time the future outlook is even more so. According to calculations I have

made the next decade, if nothing abnormal happens, will see an increase of about 13 million male workers.¹⁰ To find employment for this increase is the problem of the future. It has been pointed out time and again that the natural resources of India can support a much larger population than the present. It is argued that only 34 per cent of the area available is at present cultivated and the remaining 66 per cent, if brought under cultivation, can afford growing room and opportunities for a much larger population.¹¹ In this connection it is pertinent to ask why it is that in the most populous country of the world such a large cultivable waste is allowed to exist, when the pressure on the cultivated portion is on the increase every year. The reason, I venture to suggest, is that the so-called cultivable waste in its present state is unfit for cultivation. The Royal Commission on Agriculture has called attention to the fact that a large part of the area classed as cultivable waste other than fallow "could in no conceivable circumstances be brought under tillage."¹² The availability of the remainder is conditioned by the construction of irrigational works, and as long as it continues to exist as a barren desert it is idle to speak about extension of cultivation. What has been made possible by the construction of the Sukkur Barrage in Sind should, within limits, be possible elsewhere, and the duty of the Provincial Governments is to expedite the construction of works which they have long had in contemplation. But these constructions as well as our industrial development wait upon the accumulation of capital, and our capacity to solve the problem of population, thus, depends on our ability to save. To do this with the present national income is to attempt too much. With a birth rate that is

¹⁰ This has been obtained by adding to the existing workers males aged between 2 and 12 at present and deducting those aged 50 to 60. Allowance has been made for deaths at the average male death-rate in the different age groups.

¹¹ Prof. Findlay Shirras, *The Economic Journal*, March 1933, p. 69.

¹² *Report*, Chap. 18, para 526.

tending to increase and with the prospect of an increasing number of dependents, the national income will scarcely be sufficient to keep people alive. In this perplexity is it any wonder that discerning people should begin to talk of birth-control? By spacing the children not only would the pace at which population increases be slackened, but sudden increases in the working population would also be smothered. Our immediate problem will not disappear even if the practice of birth-control should become general. (A remote contingency.) What we need is a measure which will give quick results and increase employment so as to give full employment to all able-bodied workers. For this our hidden capital resources will have to be tapped—those immense gold hoards which have in recent years begun to see the light of day. If they could be converted into industrial capital, our natural resources need not lie unexploited nor our men be unemployed.

A PRELIMINARY NOTE
ON
THE CORRELATION BETWEEN AGRICULTURAL
PRODUCTION AND THE STABILITY OF POPU-
LATION IN TWO BENGAL DISTRICTS—
JESSORE AND MIDNAPORE

BY

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In this paper, it must be made clear at the outset that nothing new has been said. The old Malthusian thesis has, of late, been put to test in the Western Countries. This is a modest attempt on their lines and I have tried to test the classical law of population in respect of two districts of Bengal—Jessore and Midnapore. Incidentally in this study I have tried to find if there is any significant correlation between agricultural production and the stability of population.

If we ignore the effect of migration we can state that the total population of a country is regulated by the ratio between births and deaths. The considerations that influence reproduction are infinitely varied, and being of a social character they are neither permanent, nor yet universal. The reproductive instinct is indeed very strong but it may be thwarted by antagonistic forces—by the selfishness of the parents who shun their responsibilities, or of mothers who dread the pains and perils of child-bearing; by the greed of parents who would endow old age rather than foster

youth, by the desire of women to enjoy independence rather than seek marriage; by insufficient house room or exorbitant taxation, or by any one of thousand causes. Malthus also admitted this. In examining the causes of slow increase of population, at his time, in most states of Europe, although they increased very considerably in population since they were nations of shepherds, he stated that "the cause of this slow progress in population cannot be traced to a decay of the passion between the sexes as Godwin conjectured but an intimate view of the state of society in any one country in Europe, which may serve equally for all, will enable us to answer this question and to say that a foresight of the difficulties attending the rearing of a family acts as a preventive check, and this preventive check appears to operate, though with varied force, through all the ranks of Society in England."¹ The causes of death, however, are, according to the Classical School chiefly physiological and can, in most cases, specially, amongst the lower classes of the community, be ultimately traced to the lowering of vitality. Malthus also hinted at this. His theory was that positive checks would be operative and population would be restricted whenever the growth of population would exceed that of food supply and this is true chiefly, though not solely, in case of the lowest orders of the society. In other words, if in a country, the food supply is so reduced that its people have reached the starvation level of existence, the death rate would be continuously high and any increase in the supply of food stuff will be reflected in the death rate which will be appreciably reduced.

This thesis has been, in modern times, challenged and an attempt has been made to formulate a new law of population. Population growth, according to this new school, is determined by births and deaths, emigration, immigration, and that these are related to the socio-economic environment of the people in ways that can be analysed, and to a certain extent, foreseen. They

¹ T. R. Malthus, *The Essay*, First Edition, Edited by Ashley, p. 19.

assert that more fundamental is the relation between the total population of a country and its socio-economic organisation, the relation on which is based the Theory of the Optimum. Sometimes, however, they continue, both birth-rate and death-rate vary independently under the influences of certain forces which do not affect the conditions that determine the optimum. To take an instance, any victory of medicine over disease will lower the death-rate and increase the rate of population growth without providing sustenance, employment, or the necessities or comforts for a single extra person.²

This contention seems to be very well founded. But the advocates of Malthus may point out that he definitely laid down that "the positive check to population which represses an increase which is already begun, is confined chiefly, though not perhaps solely, to the lowest orders of the society."³ He thus referred to that society which possesses a precariously low margin of existence and the positive checks apply to it. He made his position extremely clear and admitted that to prove distinctly the force and extent of the operation of the positive checks would require perhaps more data than were then available. It is, however, maintained, that this qualified statement cannot be entertained. The recent study of Malthus with reference to the counties in England is an attempt to test the law in this modified form. Mine is also the same, and I find myself in the same position with the westerners. I have taken two districts of Bengal, one of which, Jessore, is now in the grip of severe famine and the other, Midnapore, is proverbially poor. Even these districts which can be said to be on a very poor level of existence do not seem to support the Malthusian hypothesis. But it must be admitted, in fairness to Malthus, that we have no data available with which we can test his law in regard to those less fortunate of our community who are almost on a starvation

² Cf. T. H. Marshall, *The Economic Journal*, Historical Supplement, 1929.

³ *Ibid* The Essays, Ch. V.

level. The figures compiled by the Sanitary Commissioner and Director of Public Health do not record deaths according to the pecuniary circumstances of the dead. A complete and scientific test could have been possible had we obtained those figures. But it can be safely asserted that in Bengal districts the bulk of the people are extremely poor.

The staple diet of Bengalis is rice and this may be said to constitute the total food supply of the province. We can thus discuss the law of Malthus with reference to its supply in the two districts. Malthus' second thesis that population does invariably increase when the means of subsistence increase is not borne out by facts.⁴ There has been, in Jessore, a reduction of population during these three decades by 141,991, i.e., 7·8 per cent and it was expected that there would be a reduction of food supply, but, on the contrary, there has been a rise in the supply of rice by about 19·6 per cent. Comparison with one year's produce may sometimes be hazardous. I have, therefore, taken the average of five years' produce from 1901 to 1905 and that from 1927 to 1931. Here also there is the same fact. The increase in the supply of rice is 16·2 per cent. In the district of Midnapore the figures do not tell exactly the same story. The population has been practically stationary during this period, the increase being only about ·36 per cent, but there has actually been a decline of 16·2 per cent in food supply. When comparison is made with the average produce of five years, we find, however, that there was a decline of 1·4 per

⁴ Malthus did not mention anything regarding the rapidity with which the adjustment may be supposed to take place. In the present note I have discussed only the short period or immediate effect.

cent.⁵ From the average figures for Midnapore, it would appear that a Malthusian adjustment might have been in operation in this district.

His third thesis is that superior power of population is repressed and the actual population is kept equal to the means of subsistence by misery and vice, that is, in other words, the checks, either preventive or positive, taken together, must always be effective, and the positive checks must be operative among the poorer section of our community. This shows that there must be a connection between food supply and the number of deaths, especially in districts which are poor. This too is not corroborated by actual facts.

In the above discussion we used figures relating to a few years only. For an adequate study we must take into consideration the whole body of available data, and use modern statistical methods. I may note in passing that mere graphical comparison is not

JESSORE

Year.	Population.	Per cent change.	Gross produce of rice in per cent of normal yield, taking normal yield =100	Per cent change.	Average of five years' produce of rice.	Per cent change of the average.
1901	1,813,155	- 78%	76	+19'6%	72'6	-16'2%
1931	1,671,164		91		84'4	

MIDNAPORE

Year.	Population.	Per cent change.	Gross produce of rice in per cent of normal yield, taking normal yield =100	Per cent change.	Average of five years' produce of rice.	Per cent change of the average.
1901	2,789,114	+ '36 p.c.	86	- 16'3 p.c.	78'8	- 1'4 p.c.
1931	2,799,998		72		77'4	

sufficient, for graphs may easily be extremely misleading. Professor Corrado Gini⁶ of Rome, in his presidential address at the International Conference of Statistics at Mexico, has recently pointed out the various drawbacks frequently met with in the case of diagrams with cartesian coordinates. The fault does not lie with the method used in their construction but with the manner in which our eye gauges the distance between lines. There is no remedy for this drawback itself and Gini has pointed out that a graphical method is never conclusive. The method of correlational analysis has been extremely useful in the study of association between various factors at work. Recent developments in mathematical statistics have supplied rigorous tests for examining the reliability of the observed associations, and it is, therefore, essential that all data should be sifted properly by these methods.

Assuming that rice forms the staple food of Bengalis, let us examine whether there is any relation between its supply and deaths. As is well known, death returns are given in calendar year, whereas harvest returns are made from July. Thus in the correlation of deaths and rice production for the same year (*vide* columns 2 and 3 in Tables A and AI), there is a lag of six months. On this basis, I have used the coefficient of correlation to measure the association between rice and deaths. This direct correlation avoids the difficulties of correcting for the changes in the purchasing power of the rupee. Using the data given in tables A and AI we find a correlation of +0.11 in Jessore and that of +0.06 in Midnapore. With a sample of 31, a correlation of less than 0.3 is not usually considered definitely significant. The observed correlations are much less than 0.3 in both the districts and are statistically insignificant. We are, therefore, not in a position to assert, on the available material, that there exists any significant statistical connexion between the supply of rice and deaths in these two districts.

⁶ *Of. Sankhya*, Vol. I, Part II.

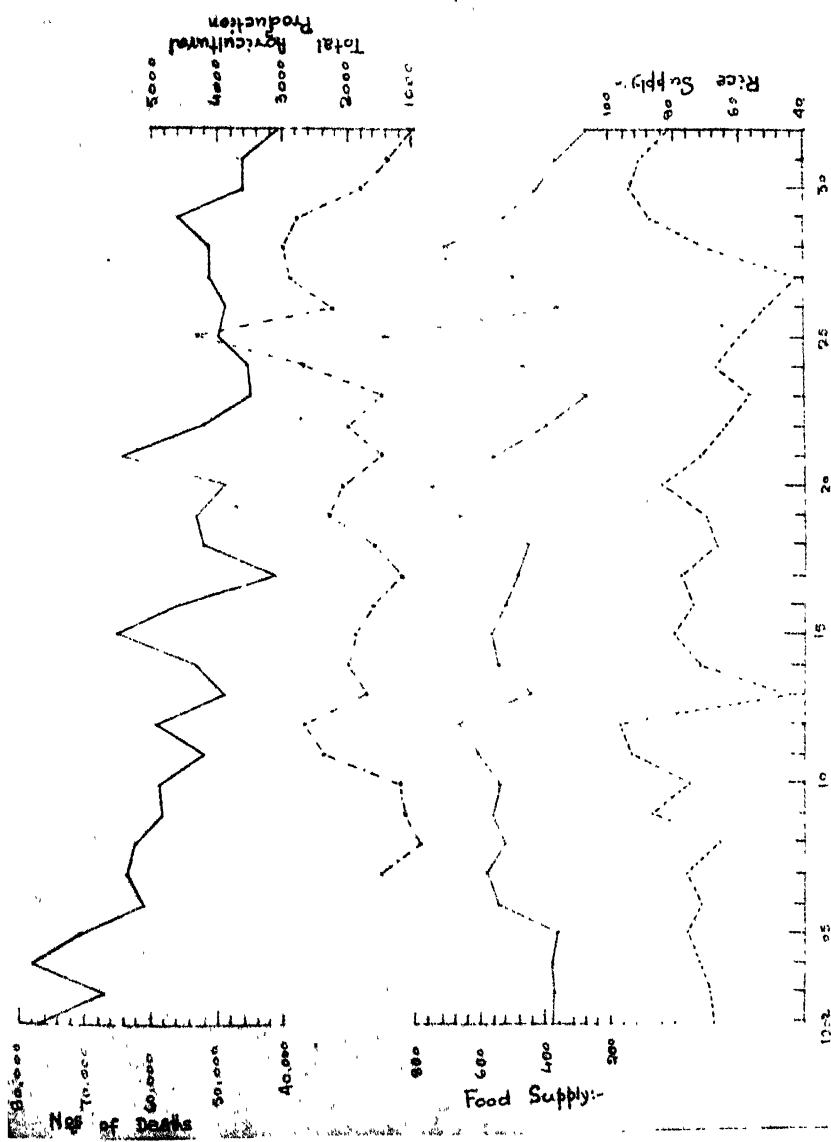
TABLE A.]

JESSORE

Year.	Deaths from all causes.	Gross produce of rice in per cent of normal yield, taking normal yield=100
1902	77,133	68
1903	67,855	69
1904	76,993	73
1905	71,328	77
1906	160,849	67
1907	63,879	75
1908	62,297	66
1909	58,198	87
1910	58,680	75
1911	52,049	93
1912	59,769	96
1913	49,498	44
1914	53,790	72
1915	65,099	80
1916	56,776	74
1917	41,575	78
1918	52,722	67
1919	53,148	70
1920	49,740	84
1921	64,409	72
1922	52,201	64
1923	45,121	57
1924	46,807	67
1925	50,308	64
1926	49,159	52
1927	51,239	42
1928	51,589	70
1929	56,818	87
1930	46,521	93
1931	46,792	91
1932	41,779	81

DISTRICT OF JESSORE

-Years-



DISTRICT OF MIDNAPUR

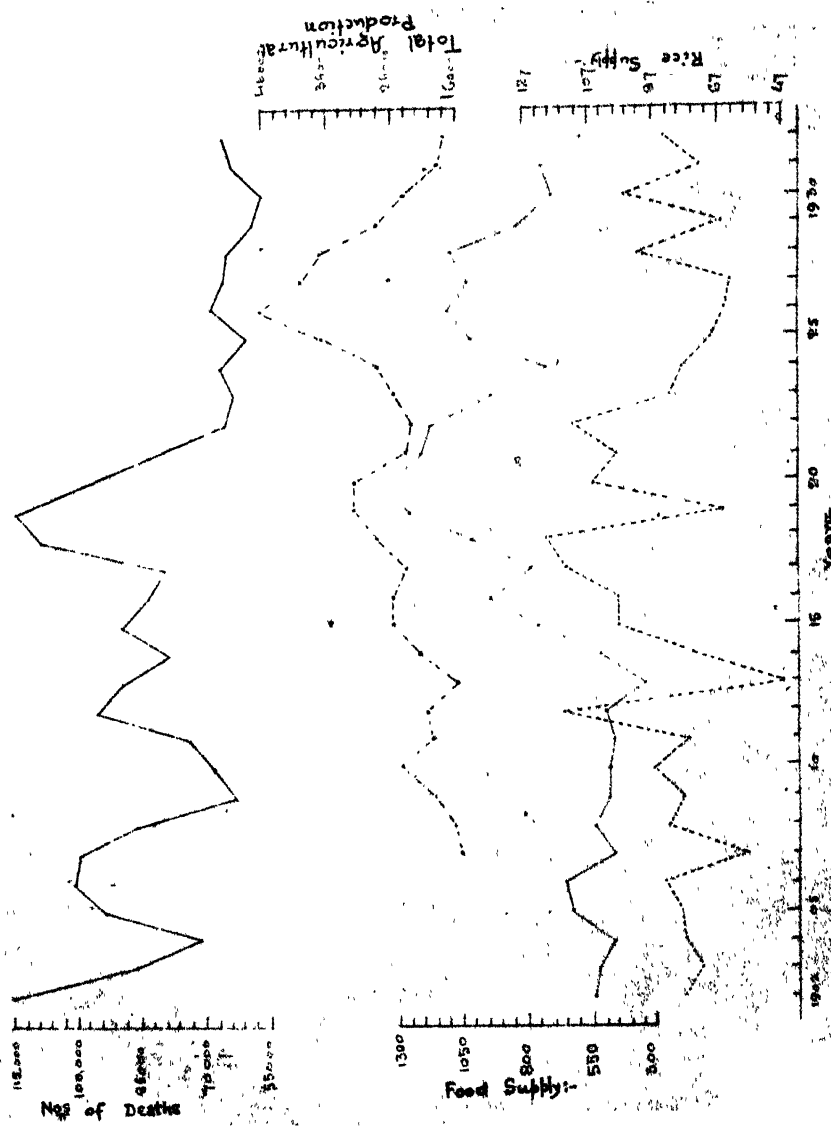


TABLE A1.] MIDNAPORE.

Year.	Deaths from all causes.	Gross produce of rice in per cent of normal yield, taking normal yield = 100
1902	115,106	78
1903	86,759	73
1904	71,948	78
1905	93,839	79
1906	100,698	84
1907	99,272	59
1908	85,911	83
1909	62,836	78
1910	67,211	88
1911	72,109	76
1912	94,875	115
1913	88,531	47
1914	77,289	75
1915	88,003	98
1916	82,657	98
1917	78,969	114
1918	107,385	120
1919	113,262	66
1920	97,895	105
1921	82,462	98
1922	64,396	112
1923	62,874	82
1924	65,889	78
1925	59,997	69
1926	67,235	65
1927	64,229	63
1928	63,838	91
1929	57,313	66
1930	55,730	95
1931	62,978	72
1932	58,781	83

It may, however, be contended that in Bengal, besides rice there is a certain amount of consumption of wheat as well, and rice and wheat should both be taken into consideration. A difficulty arises here in finding out a common denominator. How to reduce the different food supply to a common level? Maunds of rice and maunds of wheat cannot be added together. Nor can we weight wheat in terms of rice in absence of the knowledge of peoples' liking for wheat. The safest course, therefore, seems to be to find out the total money value of these two food stuffs and then make necessary corrections for changes of purchasing power of the rupee during the period of observation. Here the prices have been deflated in terms of gold prices during the period published by the Statistical Department of the Government of India. The prices recorded and used in framing these tables are the harvest prices which should not be deflated in terms either of wholesale Calcutta prices or of prices of all articles. Working on this basis, the coefficient of correlation between total rice-wheat food supply and deaths is found to be $+0.265$ in Jessore and $+0.270$ in Midnapore. Here also, they are both less than 0.3 and cannot be considered significant.

TABLE B.]

JESSORE.

Year.	Deaths from all causes.	Total money value of two food stuffs.
1902	77,133	387.52
1903	67,855	373.58
1904	76,993	377.72
1905	71,328	360.55
1906	60,849	532.29
1907	63,879	576.92
1908	62,297	518.40
1909	58,198	565.50
1910	58,680	534.88
1911	52,049	609.46
1912	59,769	658.76
1913	49,498	436.06
1914	53,790	538.46
1915	65,099	559.80
1916	56,776	529.10
1917	41,575	477.72
1918	52,722	446.85
1919	53,148	657.90
1920	49,740	734.50
1921	64,409	557.04
1922	52,201	399.00
1923	45,121	275.25
1924	46,807	465.70
1925	50,308	892.00
1926	49,159	369.00
1927	51,239	494.00
1928	51,589	705.00
1929	56,818	528.50
1930	46,521	420.50
1931	46,792	365.00
1932	41,779	274.50

TABLE B1.]

MIDNAPORE.

Year.	Deaths from all causes	Total money value of two food stuffs.
1902	115,106	549.54
1903	86,759	534.36
1904	71,948	446.39
1905	93,839	615.14
1906	100,698	658.29
1907	99,272	434.51
1908	85,911	542.56
1909	62,836	476.06
1910	67,211	462.58
1911	72,109	449.53
1912	94,875	484.75
1913	88,531	324.78
1914	77,289	504.30
1915	88,003	754.18
1916	82,657	933.56
1917	78,969	784.80
1918	107,385	1009.50
1919	113,262	1245.30
1920	97,895	1329.90
1921	82,462	1196.82
1922	64,396	1164.93
1923	62,874	921.17
1924	65,889	715.86
1925	59,997	994.71
1926	67,235	1070.25
1927	64,229	1008.69
1928	63,838	1068.50
1929	57,313	801.00
1930	55,730	681.50
1931	62,978	718.00
1932	58,781	561.54

It may further be contended that Malthus referred to food supply which is not only produced within the country but which can be acquired,⁷ and as such an association may be expected between total agricultural production and deaths. Data for this purpose are available only for twenty-five years, the harvest prices of non-food crops such as Linseed, Rape and Mustard, Sugarcane and Jute being obtainable from 1907. The total money value of the crops (corrected for the purchasing power of the rupee) will be found for each year from 1907 in the tables on pages 410 and 411. The coefficient of correlation is now +0.34 in Jessore and +0.15 in Midnapore. The 5 per cent value of the coefficient of correlation for samples of 26 is about 0.4. Both the observed correlations are less than 0.4 and as such cannot be considered significant.

The observed coefficients of correlation in any of the above three cases are not significant and the present material affords no support for the Malthusian hypothesis. But before I conclude, I must point out that there are twenty-eight districts in Bengal of which I have analysed statistically only two of them. The subject, therefore, deserves more detailed study. Besides, I have taken a lag of six months in the present paper. It would be also desirable to correlate production in one year with death rate of the succeeding year which would give a lag of about eighteen months.⁸

⁷ Cf. The Essay, First Edition, Edited by Ashley, p. 30.

⁸ This note is the result of a discussion with Professor P. C. Mahalanobis, M.A. (Cantab), I.E.S., Hony. Secretary of the Indian Statistical Institute, and it has been worked out in the Statistical Laboratory.

TABLE C.]

JESSORE.

Year.	Deaths from all causes.	Total money value of chief agricultural products.
1907	63,879	1562.60
1908	62,297	905.47
1909	58,198	1103.75
1910	58,682	1248.13
1911	52,049	2483.96
1912	59,769	2711.26
1913	49,498	1744.06
1914	53,790	2006.77
1915	65,009	1918.30
1916	56,776	1621.60
1917	41,575	1274.52
1918	52,722	1653.85
1919	53,148	2347.90
1920	49,740	2129.50
1921	64,409	1590.04
1922	52,201	2955.50
1923	45,121	1589.25
1924	46,807	2708.70
1925	50,308	4384.41
1926	49,159	2318.50
1927	51,239	2907.00
1928	51,589	3038.00
1929	56,818	2853.25
1930	46,521	1849.50
1931	46,792	14 0.75
1932	• 41,779	1074.50

TABLE C1.]

MIDNAPORE.

Year.	Deaths from all causes.	Total money value of chief agricultural products.
1907	99,272	1664·62
1908	85,911	1754·80
1909	62,836	2083·31
1910	67,211	2503·86
1911	72,109	2068·97
1912	94,875	2161·63
1913	88,531	1694·98
1914	77,289	2244·74
1915	88,003	2617·31
1916	82,657	2621·88
1917	78,969	2490·72
1918	107,385	2840·07
1919	113,262	3243·19
1920	97,895	3243·87
1921	82,462	2479·51
1922	64,396	2356·72
1923	62,874	2616·38
1924	65,889	2801·86
1925	59,997	3711·21
1926	67,235	4696·56
1927	64,229	4022·19
1928	63,838	3716·94
1929	57,313	2819·25
1930	55,730	2443·50
1931	62,978	1978·00
1932	58,781	1801·54

SOME CONCLUSIONS CONCERNING THE INTER-RELATIONSHIP OF BIRTH-RATES, DEATH-RATES, PRICES AND RAINFALL IN THE UNITED PROVINCES

BY

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The population problem is very closely linked with vital statistics, and birth-rates and death-rates form the most important part of vital statistics. Hence a study of birth-rates and death-rates, and such allied subjects as are related to these will be of immense importance while discussing and solving the population problem.

This is a preliminary report of research work done at the Allahabad University during 1932—34. The detailed methods of calculation will be given in the final report of research work, but some of the conclusions are submitted to the Indian Economic Association in connection with their discussion of the population problem. It may be mentioned that the results and conclusions stated below have been obtained by the application of recognised statistical and graphical methods.

The statistics of birth-rates, death-rates, prices and rainfall of the United Provinces on which the present study is based cover a period of fifty years (1881—1930). These statistics have been obtained from different government publications.

It may be mentioned here that birth-rates and death-rates have been corrected as regards natural increase and probable migration during intercensal years.

The prices that have been studied here are barley-prices. This has been done because, firstly, the diagrams showing the movements of prices of principal crops of the United Provinces

show almost similar upward and downward fluctuations in the same years, and barley prices seem to serve the purpose of the median of all these prices. Secondly, barley is one of the representative crops of this province for the mass of the people.

The barley-prices as given here are in seers per rupee, consequently in the diagrams peaks mean low prices and depressions high prices. In other words the price curve is an inverted price curve.

The scatter-diagrams, and other time-series diagrams showing the birth-rates, death-rates, rainfall, and prices indicate very clearly that these phenomena are very closely interrelated with each other. The coefficients of correlation also corroborate the above statement.

Taking into consideration the relationship between birth-rates and death-rates we find that the birth-rates are positively correlated with the death-rates about one year later, while death-rates are inversely correlated with birth-rates a year later. The coefficients of correlation obtained between the birth-rates and death-rates of the following year for some of the districts of the United Provinces were between $+ 0.17$ and $+ 0.57$. The coefficient of correlation between birth-rates and death-rates of the same year is also quite a high number which shows the great infantile mortality and probably deaths of young mothers.

The coefficients of correlation obtained between death-rates and birth-rates of the following year lie between -0.21 and -0.31 . This means that disease and high deaths lower the births in the following years by reducing the vitality and number of the people.

These coefficients of correlation have been calculated without taking out the trend from birth-rates and death-rates. The deviations from the trend would have given much higher coefficients.

This relationship between birth-rates and death-rates shows that nature has provided some sort of automatic adjustment of

population. High births followed by high deaths, and high deaths followed by low births prevent the increase of population to a great extent.

Coming to the prices and birth-rates, if we examine the accompanying diagram showing these phenomena we find a remarkable similarity in their fluctuations year by year. Yet the coefficient of correlation which was obtained between the actual birth-rates and prices was only $+0.35$. This was due to the trend in these phenomena which can be seen very clearly in the diagram. This trend was eliminated by calculating the deviations from seven-yearly and five-yearly moving averages for both the phenomena, and these deviations gave $+0.65$ and $+0.63$ respectively as the coefficients of correlation. (The upper two diagrams show the birth-rates and prices free of trend.)

The prices correlated with the birth-rates of the following year also gave $+0.47$ as the coefficient of correlation. This shows that there is a lag in the birth-rates of less than one year. It appears that fluctuations in prices cause opposite fluctuations in birth-rates about nine months later. Although this is a very short interval for the prices to affect births, yet as people can forecast the crop and prices some months ahead, so the total time may be considered sufficient to influence the births.

We may lay down the conclusion that high prices lead to low birth-rates and low prices to high birth-rates. In other words, we may say that prices are inversely related with the birth-rates.

Now we come to the periodic changes in these phenomena. All of these phenomena show very clearly a period of six years with high amplitudes.

These six-yearly periods have been calculated from the deviations from the five-yearly moving averages.

The accompanying diagram showing the nature and relative amplitude of the six-yearly waves in birth-rates, death-rates, prices and rainfall is of very great interest and importance. It shows very clearly the interrelation and interdependence of these phenomena, and also gives an indication of lag in them.

Let us closely analyse this diagram. We see that high rainfall is followed by low prices (as mentioned above the prices are given as seers per rupee, so the peaks really mean low prices and the depressions high prices), low prices are followed by high birth-rates and high birth-rates are followed by high death-rates. Similarly, we also see that low rainfall is followed by high prices, high prices by low birth-rates, and low birth-rates by low death-rates.

We also find that high death-rates are followed by high prices and low death-rates by low prices. This shows that disease reduces the supply of labour by rendering many hands incapable of work, and consequently there is a fall in produce resulting in high prices. Similarly low death-rates and good health of the people will increase the supply of labour, so the produce will increase and prices will fall, other things remaining the same.

From the figures of these six-yearly waves the period by which one phenomenon lags behind another phenomenon has been calculated. It has been found that the maximum rainfall occurs 8.4 months before minimum prices, and minimum prices occur 7.1 months before maximum births which are followed by maximum deaths after 17.2 months. It is also to be noted that minimum deaths occur 11.7 months before the minimum prices. It thus appears that the low prices are caused both by high rainfall and low sickness in the previous year causing the supply of labour to be increased. This explains why the relative deviation of the price is greater than that of the rainfall. Otherwise we would have expected the cause to show a greater deviation than the effect.

The three-yearly periods in these phenomena also show the same sequence, i.e., here also we find high rainfall causing low prices, low prices causing high births, and high births causing

high deaths. But here the time lag has changed in some cases. High rainfall is causing low prices after a little over one year. Low prices are causing high births after just the same time as was found in the six-yearly period. But high births are causing high deaths about ten months later.

From the median birth-rates of all the divisions in the United Provinces we find an average period of 3.60 years from the maxima, and a period of 3.65 years from the minima. Taking both maxima and minima together we find an average period of 3.625 years in the birth-rates of the United Provinces.

Similarly, from the median death-rates of all the divisions of the United Provinces we find an average period of 3.63 years from the maxima, and a period of 3.59 years from the minima. Taking both maxima and minima together we find an average period of 3.61 years in the death-rates of the United Provinces.

In the monthly death-rates we find a period of 18 months, and it seems that in other phenomena also there is a period of 18 months which shows itself as a three-yearly period in the annual figures.

Among longer periods there is an indication of a period of ten to eleven years in all these phenomena.

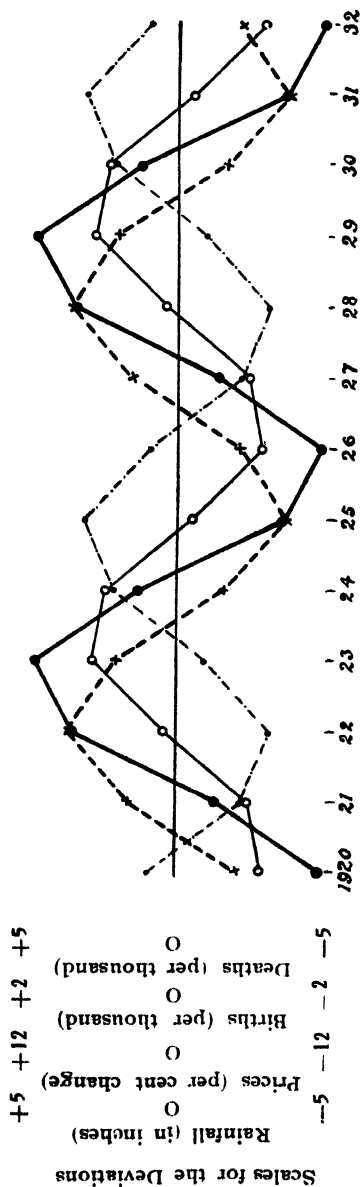
Periods of 3.1 years, 3.6 years and 11 years have been found in meteorological observations, and in the floods of the Nile river, and in several other phenomena by prominent statisticians of the West.

INTER-RELATION OF SIX-YEARLY PERIODS
IN
RAINFALL, PRICES, BIRTHS, & DEATHS
IN THE UNITED PROVINCES

The curves are drawn on such scales as to make the standard deviations of all the phenomena equal.

References:—

Rainfall
Prices
Births
Deaths
(Inverted)



THE CO-OPERATIVE MOVEMENT IN THE MADRAS PRESIDENCY

BY

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All civilized countries have recognised co-operation as an important factor in national economy. No other movement can contribute more to ameliorate the condition of the poorer classes of a country's inhabitants and increase their social influence than the co-operative movement which, rightly directed, can minimise the cost of living, cheapen production, increase employment and improve the purchasing power of the people so that a higher standard of life might be attained. The disabilities incident to poverty, viz., slenderness of resources, want of confidence and moral power, are overcome by united corporate action and a new outlook charged with hope and confidence is induced in the people. Every committee and commission that has enquired into the economic condition of rural India has dwelt upon the appalling poverty of the masses of the people who dwell always on the verge of starvation. When the grave need of the times is to improve the economic condition of the masses the importance of such a movement for India can easily be realised.

Seventy-three per cent of India's population are dependent on land, according to the census report. Dependence on land has been steadily on the increase though there has been very little improvement in the methods of production or in agricultural profits. Chronic indebtedness of the peasant cultivator, the rude implements to which he pins his faith even at the present day, and

the absence of proper marketing facilities have each contributed their share to this result. The weight of the heavy millstone of indebtedness can be lightened from the shoulders of the poor peasant if a number of rural credit societies, established throughout the country, readily advance him money on lighter terms. Similarly the establishment of non-credit societies can to a large extent remove the other disabilities under which he is groaning to-day. Experiments in agricultural production and marketing have been tried with success in other countries and 'better business, better farming and better living' have been achieved. The co-operative movement in other lands has covered almost every sphere of national activity. In the realm of agriculture Finland has met with remarkable success by establishing co-operative societies for the purchase of land and live stock as well as for marketing and insurance.¹ Co-operative development has been a marked feature, in recent years, of the national life of England, France, Germany and Japan.

Co-operation in India was, for the first time, officially recognised by the passing of the Co-operative Act of 1904. The progress of the movement in India was slow since the activities of co-operative societies were restricted to credit. The scope of co-operative activity was extended in 1912 by the passing of a new Act. Yet credit is the most important feature of the movement in this country; and this is no doubt inevitable considering the extent of rural indebtedness. In 1915 the MacLagan Committee surveyed the progress of the movement and submitted a masterly report pointing out its merits and defects. With the passing of the Montague-Chelmsford Act in 1919 Co-operation became a Provincial Transferred subject under the charge of Indian ministers. Considering the extent and population of India the progress of co-operation has been slow in this land. The Banking Enquiry Committee estimates that in 1930 there were about 100,000 societies in India, of which 78,000

¹ Vide Finland, A Nation of Co-operators, by Thorstera Odhe.

were credit societies, having 3 million members and a working capital of Rs. 40 crores.

The non-credit societies numbered 16,000 and had a membership of 650,000 with a working capital of six crores of rupees. Taking the strength of an average family to be five it may be safely asserted that the co-operative movement has touched only 15 million people in this country. That only the fringe of the problem has as yet been touched will be made clearer by the following table :—

Province	Proportion of members of agricultural societies to families in rural areas.	
	All Societies. Per cent	Credit Societies. Per cent
Ajmere-Marwara	... 15.4	15.0
Assam	... 2.9	2.9
Bengal	... 4.4	3.8
Bihar and Orissa	... 3.2	3.1
Bombay	... 10.0	8.7
Burma	... 3.9	3.7
Central Provinces and Berar	... 2.4	2.3
Coorg	... 36.2	36.2
Delhi	... 11.5	11.5
Madras	... 8.3	7.9
North-West Frontier Province	... 0.2	0.2
Punjab	... 10.9	10.2
United Provinces	... 1.8	1.8

Though Madras comes third in India in the matter of co-operation much yet remains to be done. The problem of rural indebtedness is graver than ever. It cannot be said that the advent

of this movement has arrested—let alone diminished—the increase of indebtedness of the agriculturist in this province. The peasant still goes to the money-lender in preference to the co-operative society since the former is more ready to advance him money and does not insist on punctual payment. Naturally the amount of the loan multiplies with added interest and is often converted into a mortgage on the land. Year by year indebtedness increases steadily and according to the Madras Banking Enquiry Committee, since the Nicholson Report, the number of mortgages registered every year has increased threefold. The following table shows how mortgage-debts have been increasing in Madras since 1895²:

Year.	Instruments of Mortgage.		Bonds or Obligation for payment of money.	
	Number.	Aggregate value	Number.	Aggregate value.
1895	363,993	7,49,60,530	24,503	84,12,225
1896	352,193	7,21,25,986	23,393	52,80,486
1897	373,754	7,68,60,953	24,006	60,20,425
1898	368,998	7,53,14,713	21,436	51,32,290
1899	364,811	7,75,75,561	20,626	47,62,151
1900	410,746	8,25,14,728	20,746	48,48,908
1901	411,989	8,29,23,837	20,968	49,13,462
1902	384,057	8,11,40,299	19,923	49,67,738
1903	380,400	7,69,96,330	16,836	44,92,349
1904	366,666	8,19,78,988	15,871	39,35,200
1905	450,402	8,80,87,142	18,052	44,83,465
1906	483,218	9,88,52,411	18,779	43,49,093
1907	504,030	10,52,87,218	18,568	50,71,025

² See the Madras Provincial Banking Enquiry Committee, pp. 79, 80, 81, 82.

Year.	Instruments of Mortgage.		Bonds or Obligation for payment of money.	
	Number.	Aggregate value.	Number.	Aggregate value.
1908	519,548	11,47,90,784	18,457	53,42,227
1909	531,976	12,05,58,403	18,952	61,55,140
1910	520,831	12,33,63,327	19,681	62,52,928
1911	528,987	13,02,00,237	20,988	62,81,409
1912	569,609	14,61,92,551	23,438	75,28,280
1913	563,604	15,14,87,657	24,178	75,30,825
1914	532,331	14,78,98,968	24,591	80,30,783
1915	518,178	15,03,71,306	25,206	82,32,570
1916	539,585	15,79,31,266	25,505	1,04,62,693
1917	529,597	15,58,19,013	26,352	1,03,21,961
1918	540,163	17,07,40,138	25,719	1,08,70,219
1919	535,585	20,27,53,330	29,372	1,62,22,449
1920	593,933	20,62,08,902	29,374	1,87,06,741
1921	593,761	20,84,81,946	28,196	2,34,76,598
1922	500,301	19,66,60,355	25,458	1,99,66,886
1923	490,096	19,07,61,541	28,486	2,17,50,994
1924	506,918	19,94,18,477	30,669	2,39,68,085
1925	508,355	20,10,06,341	30,335	2,49,37,524
1926	494,227	19,71,02,316	29,857	2,46,06,099
1927	525,747	20,56,72,473	33,952	3,99,07,501
1928	510,974	19,87,43,259	32,255	3,43,26,954

That only a small fraction of rural credit comes from the co-operative societies will become evident from the following table

based on investigation of a few villages in the presidency undertaken at the instance of the Madras Banking Enquiry Committee:—

Village.		Imperial Bank.	Government.	Professional money- lenders.	Ryot.	Co-operative Societies.
East Godavari						
Village	1	...	...	48	7	45
do.	2	22	...	36	12	30
do.	3	...	...	53	25	22
Bellary						
	1	...	10	26	64	...
do.	2	...	8	37	55	...
do.	3	...	14	46	35	5
Madura						
	1	...	...	56	43	1
do.	2	..	1	55	32	12
do.	3	...	...	...	100	...
Coimbatore						
	1	...	3	4	49	44
do.	2	5	...	...	57	38
do.	3	...	...	16	84	...
Average		2	3	31	47	17

From the above table it may be seen that the ryot money-lender advances 47 per cent, the professional moneylender 31 per cent, the Government 3 per cent and the co-operative society about 17 per cent. The increase in indebtedness can therefore be ascribed to the heavy rates of interest charged by the ryot as well as the professional moneylender. It may be pointed out here that

the total agricultural indebtedness in Madras amounts to 150 crores and in this respect it is exceeded only by Bihar and Orissa as is evident from the following table.³

Province,		Total Rural Indebtedness.
		Rs.
Assam	...	22 crores.
Bengal	...	100 crores.
Bihar and Orissa	...	155 crores.
Bombay	...	81 crores.
Burma	...	50 to 60 crores.
Central Areas	...	18 crores.
Coorg	...	35 to 55 lakhs.
Central Provinces	...	36 crores.
Madras	...	150 crores.
Punjab	...	135 crores.
United Provinces	...	124 crores.

It cannot be denied that the extension of co-operative organisation in this province will go a long way to minimise this evil.

As long ago as 1892 the Government of Lord Wenlock recognised the importance of the movement by deputing Mr. Frederick Nicholson to study the theory of agriculture and land-banks in Europe. Though the movement had a foreign origin its principles are not alien to India as is evident from the working of the Hindu joint family as well as the craft guilds of Ancient India. Even before this movement came into existence mutual loan associations or *Nidhis* played a part in the economic life of this presidency. The officials of Madras had a mutual loan fund called 'Suddar Court Fund' in 1850 the object of which was to offer loans to members on reasonable interest. These societies were found illegal in 1872 since they were not registered under the Indian Companies'

³ See The Indian Central Banking Enquiry Committee, Vol. I, p. 55.

Act, and the result was that many societies were liquidated involving a total loss of 20 lakhs. Though between 1872 and 92, 260 *Nidhis* failed it may be said that 'the *Nidhis* of to-day have on the whole been working on better lines.' The main objects of *Nidhis* are to facilitate savings, to relieve members from old debts, and to accumulate funds for special loans. Now these *Nidhis* are registered under the Indian Companies' Act—five of them as banks, and the rest as *Nidhis* under a separate list. In March 1929 there were 228 *Nidhis* in the presidency distributed as follows:—

District	Number.	Paid-up share capital.
		Rs.
Madras	17	67,82,839
Chingleput	12	8,48,368
South Arcot	5	6,42,230
North Arcot	7	5,63,848
Tanjore	8	35,02,124
Trichinopoly	16	9,22,496
Madura	1	11,26,056
Ramnad	5	4,54,226
Salem	6	2,85,750
Coimbatore	123	77,21,842
Tinnevelley	1	76,337
Guntur	1	15,604
Nellore	1	2,65,313
Bellary	7	4,79,921
Anantapur	10	4,40,697
The Nilgiris	4	2,80,405
Chittoor	4	5,01,477
Total	228	2,49,09,533

The first co-operative society in the presidency was registered on 30th August, 1904. At first the progress of the new venture was slow. In 1907 there were only 63 societies with 6,439 members, in 1912 there were 972 societies with 66,156 members; and in 1915, 1,600 societies with 118,726 members. The following table indicates the progress of the movement since then :—

Year.	Societies of all kinds.	Year.	Societies of all kinds.
1915—16	1,800	1924—25	11,141
1916—17	2,216	1925—26	11,973
1917—18	2,718	1926—27	13,357
1918—19	3,676	1927—28	14,510
1919—20	5,027	1928—29	15,086
1920—21	6,289	1929—30	15,238
1921—22	7,389	1930—31	14,878
1922—23	8,443	1931—32	14,435
1923—24	9,785		

The financing of these societies was at first undertaken by the Government; but within a year the Madras Central Urban Bank was started and it undertook the work of financing the co-operative societies throughout the presidency. Besides this the co-operative societies raised funds by means of share capital and deposits.

In 1909 two central banks were started for financing rural and urban societies. The Banking Union, a new variety of central bank, which had individuals as well as societies as shareholders,

came into existence in 1912. Such unions not only advanced loans to members but also exercised some measure of supervision over affiliated societies.

By 1910 effective supervision of societies either by the Central Banks or by the Registrar was found impossible and so new organisations called Supervising Unions sprang into existence in order to supervise the affiliated societies, and their membership was confined to co-operative societies within a seven miles radius. The following table indicates the growth of Supervising Unions since 1916 :—

Year.	Supervising Unions.	Year.	Supervising Unions.	Year.	Supervising Unions.
1916-17	57	1921-22	211	1927-28	414
1917-18	74	1922-23	249	1928-29	448
1918-19	102	1923-24	280	1929-30	450
1919-20	136	1924-25	325	1930-31	454
1920-21	179	1925-26	367	1931-32	430
		1926-27	388		

The first Urban Co-operative Society known as the Conjeveram Town Bank was formed in 1904 in the Chingleput District to advance credit to members in Urban areas and in 1905 the first non-credit society, called the Triplicane Co-operative Stores was formed. This was followed by similar societies at Coimbatore and Madura. To co-ordinate the work of the various societies in the presidency and to promote co-operative work in all directions a Provincial Co-operative Union was registered at Madras in 1914. The following table shows the growth of non-credit societies of

all kinds in the Madras Presidency between the years 1915 and 1932 :—

Year.			Non-credit Societies.
1915—16	...	...	31
1916—17	...	...	42
1917—18	...	...	70
1918—19	...	...	138
1919—20	...	...	225
1920—21	...	...	256
1921—22	..	...	245
1922—23	...	...	256
1923—24	...	...	292
1924—25	...	...	581
1925—26	...	...	679
1926—27	...	.	822
1927—28	...	...	963
1928—29	..	...	1,080
1929—30	..	...	1,064
1930—31	...	...	950
1930—31	...	...	875

Some idea can be formed of the position of co-operation in Madras in relation to other provinces from the table below⁴ :—

Provinces.			Total at the end of the year.
Assam	...	...	1,390
Bengal	..	...	22,532
Bihar and Orissa	...	...	9,404
Bombay	...	...	5,734
Burma	...	...	3,215
Central Provinces	...	...	4,137
Madras	...	...	15,237
N. W. Frontier	...	...	166
Punjab	...	...	20,333
United Provinces	...	...	5,467

⁴ Figures for 1930-31, India, pp. 591—603.

Though Madras claims a third place in respect of the number of societies, taking urban and rural societies together, only 2·1 per cent of the population are associated with the movement. But taking the aggregate working capital into account Madras comes second with 18 crores of rupees while the Punjab has 18·5 crores, Bengal 14·7 and Bombay 12·8. If we compare Madras with other provinces in regard to the number and the total working capital of agricultural credit societies including mortgage banks we find that though Madras comes third in the number of societies to her credit she comes second in the matter of working capital. For while Bengal has 19,156 societies with about 4·9 crores of working capital, Bombay 4,526 with about 2·87 crores and the Punjab 16,125 societies with about 7·79 crores, Madras has 12,540 societies with a total working capital of about 6·64 crores. As regards non-agricultural credit societies including Urban Banks, Madras comes first in the number of societies and second in the amount of total working capital. Of societies of this kind Madras has 1,151 with a working capital of about 1·66 crores while Bengal has 456 societies with 2·57 crores, Bombay, 580 societies with 3·32 crores and the Punjab, 1,092 societies with ·96 crores. Madras has lagged behind in the matter of non-credit societies of all kinds including sales societies. The lead in this aspect of co-operation is taken by Bihar and Orissa with 8,949 societies and a total working capital of about 2·76 crores while Bengal has 2,736 societies with ·8 crores, Bombay, 504 societies with 1·28 crores, the Punjab, 2,959 societies with ·56 crores, and Madras, 437 societies with ·18 crores. In regard to Central Banks, Banking Unions and Provincial Banks the following tables make clear the position:—

CENTRAL BANKS AND BANKING UNIONS.⁵

	Members.		In thousands.				Total Working Capital.
	Individuals.	Societies.	Share Capital and Reserve.		Loans.		
			Rs.	Rs.	Rs.	Rs.	
Ajmer-Marwara	7	800	780	4,17	15,53	4	19,74
Assam	16	462	1,118	2,63	13,58	2,75	18,96
Bengal	116	4,652	19,071	78,03	264,91	112,76	455,70
Bihar and Orissa	67	2,742	9,077	36,31	15,299	39,48	228,78
Bombay	19	6,535	4,001	36,24	193,54	54,83	284,61
Burma	12	1,072	992	18,43	28,05	4,75	51,23
Central Provinces ^b	34	48,848	3,955	48,00	177,53	15,02	240,55
Delhi	1	66	426	1,50	12,20	1	13,71
Madras	31	3,484	12,923	76,60	353,01	197,57	627,18
N. W. F. Province	1	36	114	21	2,29	92	3,42
Punjab	118	3,472	18,928	63,23	575,37	66,88	705,48
United Provinces	69	5,498	5,168	35,25	53,76	4,04	93,05
Total	491	77,667	76,553	400,60	1,842,76	499,05	2,742,41

⁵ The Indian Central Banking Enquiry Committee, p. 115.⁶ The practice of the Central Provinces seems to be that the individual members of Central Banks are generally members of the primary societies.

PROVINCIAL BANKS.

	Members.		In thousands.				Total Working Capital.	
	Individuals.	Societies.	Share Capital and Reserve.	Debentures,		Loans.		
				Rs.	Rs.	Rs.		Rs.
			No Provincial Bank in the Area.					
Ajmer-Marwara	...							
Assam	...	31	35	99	...	2,37	12	3,48
Bengal	168	20,78	...	163,25	...	184,03
Bihar and Orissa	...	29	79	9,33	..	63,80	38	73,51
Bombay	..	808	1,632	18,83	9,80	120,51	66	149,80
Burma	...	188	1,648	58,41	...	27,29	...	85,70
Central Provinces	...	40	2,499	10,48	...	95,99	..	106,47
Delhi	...		No Provincial Bank in the Province.					
Madras	...	184	58	15,81	2,15	75,87	85,43	179,26
N. W. F. Province	...		No Provincial Bank in the Province.					
Punjab	13,008	10,91	5,00	63,13	16,74	95,78
United Provinces	...		No Provincial Bank in the Province.					
Total	...	1,280	19,127	145,54	16,95	612,21	103,33	878,03

Though considerable progress has been made by Madras in several directions, when one takes her population into consideration, there does not seem to be too much reason for congratulation. On the other hand the Punjab, relatively to her population, leads in the co-operative movement by her all-round progress. Much leeway has yet to be made by Madras in the direction of non-agricultural credit societies and sales societies. While the credit aspect of co-operative endeavour has been in the forefront, those aspects of the movement which are calculated to promote better living and better production by corporate activity have not received the attention they merit. Credit, they say, can be misused by the agriculturist beset by temptations; but the skill and confidence that he gains by united effort will be an acquisition beneficial not only to himself but also to posterity. However, the resources open to the societies form only a very small fraction of the annual requirements while at the same time there is need for the wider extension of the movement both in urban and in rural areas.

Though such are the needs of the movement various forces have tended to restrict the scope of co-operation in the province instead of encouraging it to develop into greater usefulness. The Registrar of Co-operative Societies in his report for 1931-32 (latest) says that during the year, while 100 agricultural societies were registered, the registration of 504 agricultural societies was cancelled. The following table shows how in recent years the number of registered societies every year has declined while the number of societies liquidated has been steadily on the increase.

SOCIETIES REGISTERED AND LIQUIDATED FROM 1926—32.

Year.	Societies Registered	Societies Liquidated.
1926—27	1,455	71
1927—28	1,260	107
1928—29	726	150
1929—30	535	383
1930—31	320	516
1931—32	129	629

This is not a feature peculiar to Madras. The Registrars of Co-operative Societies in Bihar and Orissa as well as the United Provinces tell a similar tale. The Registrar of Co-operative Societies, U. P., in his report for 1930-31, says: 'So far as the Credit Societies are concerned, roughly it may be said that one-third are bound to go sooner or later, another one-third are on the border line whose future depends on circumstances, while the remaining one-third are, in the main, thoroughly unsound.' In Bihar and Orissa also the Registrar points out that a close examination of the working of co-operative societies in that province in 1929-30 reveals a somewhat precarious state of affairs. Opinions may differ as to the extent to which the movement has received a set-back in this as well as in other provinces. But it cannot be denied that the progress of the movement has been visibly retarded in almost every province of this land.

An unduly pessimistic view of the movement as a whole has been taken in certain quarters, and the arguments that the Board of Revenue urged against Mr. Frederick Nicholson in 1896 are revived. It is sought to be proved that the selfless social worker inspired with abounding zeal for reform is conspicuous by his absence and that the movement has been captured by political and communal cliques and that therefore the activities of the societies must be restricted. The element of truth in this line of argument makes it all the more insidious. It is no doubt true that political and party feelings have affected the working of some societies in this province. At worst, this can only be a passing phase, which can be tided over by devoted and continued endeavour with a little more of optimism. However, it is worth-while to examine with what basis of truth these charges are levelled. Even leading supporters of co-operation in Madras have admitted that all is not well with the movement. Cases of fraud and misappropriation have been painfully frequent and the Registrar of Co-operative Societies in his report for 1931-32 records that the number of criminal prosecutions during the year was 49 as against 71 in the previous

year. Honesty is the keystone of the arch of co-operation and without it the whole edifice must tumble down. It behoves all those interested in the development of this province to give their best attention to the problem of weeding out from the movement the dishonest and the undeserving.

However, embezzlement and fraud have been neither solely nor primarily responsible for the set-back the movement has received in Madras. The causes for such a state of affairs lie deeper. Over-much emphasis has been laid on the credit side of the movement and sufficient care has not been taken to see that loans are utilised for immediate productive purposes. Short term loans have often been used by agriculturists for long term purposes and since the loans could not be returned at the end of the harvest overdues have tended to accumulate and the major part of a society's resources has thus been locked up. The depression in commerce and industry has, no doubt, had a baneful effect on the working of co-operative societies of every kind and overdues have become a marked feature of societies of all kinds. The following table⁷ shows the increase in overdues:

Year.	Demand under principal in the year in lakhs of Rs.	Amount overdue.	Percentage of column 3 to 2.
1915-16	32'939	10'435	31'68
1916-17	40'471	11'644	28'77
1917-18	47'778	11'686	24'45
1918-19	53'286	13'097	24'57
1919-20	68'316	16'384	23'98
1920-21	95'490	29'278	30'66
1921-22	119'873	37'265	31'08
1922-23	137'953	46'613	35'96
1923-24	163'958	68'357	41'69
1924-25	201'567	84'565	41'95
1925-26	233'570	107'793	46'15
1926-27	265'629	121'295	45'66
1927-28	316'740	135'575	42'81
1928-29	361'118	147'729	40'90
1929-30	379'723	176'238	47'00
1930-31	427'298	254'515	59'56
1931-32	436'882	275'730	63'11

⁷ Compiled from the Annual Reports of the Working of Co-operative Societies' Act II of 1912, Madras, 1915-32.

Many directors do not seem to realise that one of the best methods of national service is promoting the cause of co-operation in this land. Faction, favouritism and nepotism have no place in the economy of co-operation. Petty jealousies and bickerings should be forgotten in the disinterested service of the people. Incompetence and dishonesty must be cut off with a ruthless hand if the movement should have a strong and healthy growth. Neither personal prominence nor party aggrandisement should be allowed to dominate the working of any society large or small. Special care should be taken to see that funds are applied for the purposes for which they are ostensibly borrowed and unremitting and vigilant supervision should make the path of the slacker and the shirker extremely difficult to tread. Independent and effective auditing can alone insure the continued progress of any society. Government also should try their level best to mend societies instead of rushing to end them and must follow a policy of rectification and cautious registration rather than a policy of winding up and liquidation at any cost. These factors then are, in the main, responsible for the stagnation of the movement in this province.

It may be well to suggest how this crisis in co-operation can be tided over. The association of government with the co-operative movement has contributed in the past to steadying the movement and inspiring the confidence of the public in its working. One should think twice before one suggests that there should be any great measure of relaxation of government responsibility. Genuine interest on the part of officers of government in the growth of the movement can go a long way to help it. A progressive and sympathetic policy on the part of the minister in charge has helped the movement a great deal in the past and there is no reason to think that a similar policy in the future will not produce even better results. But government policy apart, the impulse for a new and better order must come from within, from a genuine desire on the part of the cultured and public-spirited to see that co-operation in

their province runs along right lines. Every endeavour should be made to rescue societies from the grip of faction and party. The large overdues which have accumulated can be reduced by enabling debtors to pay back in easier instalments, by reducing the rate of interest, and if necessary by foregoing the interest altogether, if at least the principal, can be recovered. Such measures, no doubt, are the last resort; but when no other measures succeed such will have to be adopted. Other countries in similar predicaments have also resorted to these drastic remedies. Since property statements form the basis of credit no effort should be spared to see that they are accurate and up-to-date. Ruthless and stringent measures to enforce this will certainly have a salutary effect on the movement. It is also desirable to make the terms of the Societies' loans more attractive by reducing the rates of interest as much as possible.

The importance of an independent, impartial and accurate system of auditing for the successful working of societies cannot be over-emphasised. The question of the method of auditing has been very much in the public eye of late. Four different methods of audit have been suggested and discussed: audit by local unions, by central organizations, by certified firms of accountants and by government. It would be difficult to indicate an exclusive method of audit which can meet the often divergent needs of the various societies; but a close examination of the problem cannot fail to reveal methods which are more suited to the needs of the situation. Audit by local unions is open to the objection that the auditor who has to review the work of the directors is appointed by the directors themselves. Impartial and independent auditing is impossible when the auditor is a creature of the directors. The central scheme of auditing has also its own disadvantages; auditors who go periodically to distant societies can have no intimate knowledge of their working and the central organization has to depend on their notes and observations. From G. O. No. M. S. 224 dated 21-2-'33 we learn that this system of audit is not popular. Auditing by an independent and reliable body of professional auditors would be

the best solution of the problem. Nevertheless it must be realised that a body of trustworthy auditors specially trained for co-operative work can grow up only in course of time. Till then the task of auditing will have to be shouldered by government. The enthusiasts for de-officialization may not subscribe to this view; but it would be unreasonable to suspect the bona fides of government especially when co-operation will be in the hands of a popular, elected minister under provincial autonomy. In recent years national economy has been more and more the concern of the state and hence state direction and regulation must be welcomed rather than resented. It must, however, be the endeavour of the state to associate more and more, private auditors with the work of auditing the societies till the time comes when the burden can be transferred to an independent and reliable body of fully trained auditors.

Expansion and reinvigoration cannot, however, be the result of mere rectification or re-orientation of policy. The sustaining power of all co-operative action is the strongly felt need of the masses of the people. Proper education in the principles of co-operation and intensive propaganda as to its urgency can alone rouse in them this desire. Education in co-operation can secure not only a large body of enthusiastic co-operators but also a continuous supply of skilled organisers, auditors and workers. In countries of the West this task has been taken up by such institutions as the American Co-operative College of Wisconsin, the Leningrad Co-operative Academy and the Co-operative College at Manchester. These institutions are being maintained by the Co-operative Organizations of the countries concerned, and they have even gone further and awarded scholarships for advanced studies in co-operation. A central College of Co-operation in this presidency is therefore to be desired.

Thus equipped and reformed the co-operative movement in this province can set before itself loftier ideals and wider fields of usefulness. Better business, better living and better farming can be

secured by encouraging habits of thrift and united action. A reduction of interest and facilities for easy credit along with the growth of the investment habit will promote banking. When the ideals of unselfish work, unity and social service become more widely held and appreciated, the activities of co-operation can be extended in new directions. Greater attention can be devoted to the non-credit and ameliorative aspects of co-operative work such as housing, wholesale buying and selling, rural reconstruction and model agricultural schemes. Since agriculture is the primary industry of this land there is unlimited scope for societies whose object is to demonstrate and popularise improved methods of agriculture and modern implements of farming. Cattle-breeding and dairying can also be undertaken with profit on a co-operative basis. In this connection it is necessary to point out that special attention should be paid to the problem of extending the benefits of co-operation to those classes in the presidency who are backward and submerged.

This vast field of humanitarian work is not for one class or section of the people, official or non-official, to undertake single-handed. The fight against dis-union, poverty and ignorance must be taken up unitedly by government and popular leaders working hand in hand. It would not do for government to shirk their responsibility for the ultimate success of the movement they have inaugurated. Nor would it do for popular leaders to fight shy of government. Consistent and selfless endeavour can ere long, without any shadow of a doubt, raise the movement from the morass of stagnation and enable it to be a power for good to the large mass of the people of this country.

Year.	Agricultural Demonstrative Societies.
1926-27	... 13
1927-28	... 15
1928-29	... 16
1929-30	... 17
1930-31	... 16

A STATEMENT, SHOWING THE PERCENTAGE OF BALANCE TO DEMAND UNDER PRINCIPAL, ARREARS, INTEREST AND CURRENT INTEREST FOR YEARS FROM 1915 TO 1932, FOR AGRICULTURAL SOCIETIES.

Year.	Demand under principal in lakhs of Rs.	Amount overdue in Rs.	Percentage of column 3 to 2.	Interest overdue at the end of the previous year in Rs.	Interest overdue at the end of the year in column 5 in Rs.	Percentage of column 6 to 5.	Interest accrued and fallen due during the year in lakhs of Rupees.	Balance overdue at the end of the year out of the demand in column 8 in lakhs of Rupees.	Percentage of column 9 to 8.
1915-16	32'939	10'435	31'68	2'251	1'156	51'35	5'845	1'789	30'61
1916-17	40'471	11'644	28'77	2'869	1'448	50'48	7'216	1'972	27'34
1917-18	47'778	11'686	24'45	3'413	1'725	50'48	8'299	1'990	23'98
1918-19	53'286	13'097	24'57	3'630	1'982	54'61	9'978	2'198	23'43
1919-20	68'316	16'384	23'98	4'180	2'259	54'01	11'738	2'531	21'56
1920-21	95'490	29'278	30'66	4'536	2'617	57'68	15'025	4'147	27'60
1921-22	119'873	37'265	31'08	6'659	3'174	47'66	19'292	5'393	27'96
1922-23	137'953	46'613	35'96	8'498	3'942	48'38	29'684	7'484	31'59
1923-24	163'958	68'357	41'69	11'321	5'675	50'12	27'651	9'606	34'73
1924-25	201'587	84'565	41'95	15'362	7'601	49'48	32'052	11'487	35'83
1925-26	233'570	107'793	46'15	19'452	10'479	53'87	36'822	14'076	38'23
1926-27	265'629	121'295	45'66	25'040	13'492	53'88	39'778	16'446	41'34
1927-28	316'740	135'575	42'81	30'173	17'223	57'08	47'846	17'557	36'70
1928-29	361'118	147'729	40'90	35'085	19'328	55'08	55'989	19'992	35'70
1929-30	379'723	176'238	47'00	38'002	22'473	59'00	58'454	23'354	39'00
1930-31	427'298	254'515	59'56	46'958	30'615	65'20	62'747	31'348	49'91
1931-32	436'882	275'730	63'11	61'541	38'309	62'25	60'433	31'287	51'77

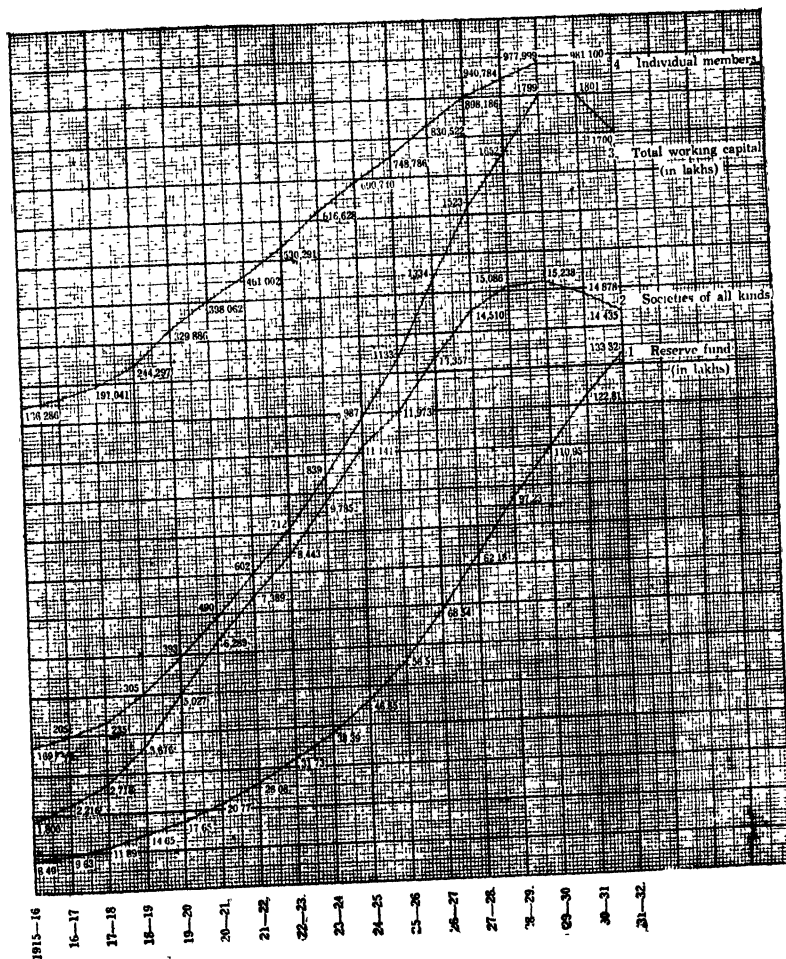
(Compiled from the Annual Reports on the working of the Co-operative Societies' Act II of 1912)

Year.	Central Banks.	Societies of all kinds.	Total Working Capital (In lakhs of Rs.)	Reserve Funds (In lakhs of Rs.)	Individual Members.	Urban Credit Societies.	Building Societies.	Supervising Unions.	Societies under Liquidation	Non-credit Societies.	Agricultural Credit Societies.	
											No. of Societies	Members.
1915-16	11	1800	168.89	8.49	136286	134	8	...	63	31	1593	100465
1916-17	14	2216	204.99	9.63	163121	196	10	57	73	42	1907	118437
1917-18	20	2718	234.92	11.89	191041	283	10	74	69	70	2271	135465
1918-19	26	3676	305.21	14.65	244297	361	10	102	79	138	3048	169223
1919-20	30	5027	393.00	17.45	329886	478	15	136	86	225	4156	227581
1920-21	33	6389	490.35	20.77	398062	614	16	179	103	256	5207	275442
1921-22	33	7389	601.11	26.08	461002	694	15	211	142	245	6206	326612
1922-23	33	8443	711.59	31.73	530291	805	18	249	144	256	7100	376679
1923-24	33	9785	839.27	38.39	616628	955	29	280	158	292	8103	438465
1924-25	32	11141	986.57	46.85	690740	1039	78	325	180	581	9164	487431
1925-26	32	11973	113.28	56.5	748786	1073	94	367	215	679	9822	523564
1926-27	32	13357	1334.34	68.54	830522	1115	109	388	258	822	11000	583315
1927-28	32	14510	1522.98	82.18	898186	1135	121	414	200	963	11966	630298
1928-29	32	15086	1631.53	97.23	940784	1144	140	448	358	1080	12382	655670
1929-30	33	15238	1799.36	110.95	977999	1151	145	450	688	1064	12540	674590
1930-31	33	14878	1800.52	122.81	981100	1130	133	454	674	950	11821	596072
1931-32	33	14435	1699.98	133.32	...	1097	124	430	629	875	11999	

GRAPHS

Graph showing :—

1. Societies of all kinds.
2. Total working capital in lakhs.
3. Individual Members.
4. Reserve Fund.



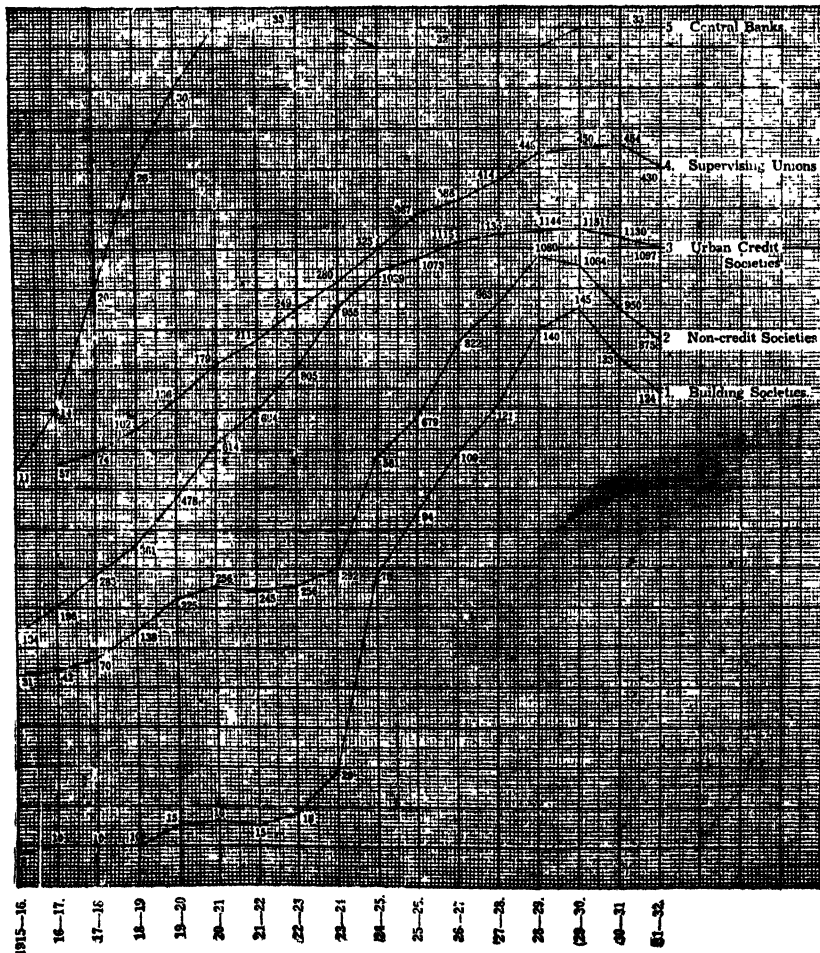
SCALE :

1. 1 Div. represents Rs. 10,00,000
2. 1 Div. „ 1,000 societies.
3. 1 Div. „ Rs. 100 lakhs.
4. 1 Div. „ 100,000 members.

(N.B.—Numbers given to curves do not correspond with the numbers given to different items at the top.)

Graph showing :—

1. Building Societies.
2. Non-Credit Societies.
3. Urban Credit Societies.
4. Supervising Unions.
5. Central Banks.

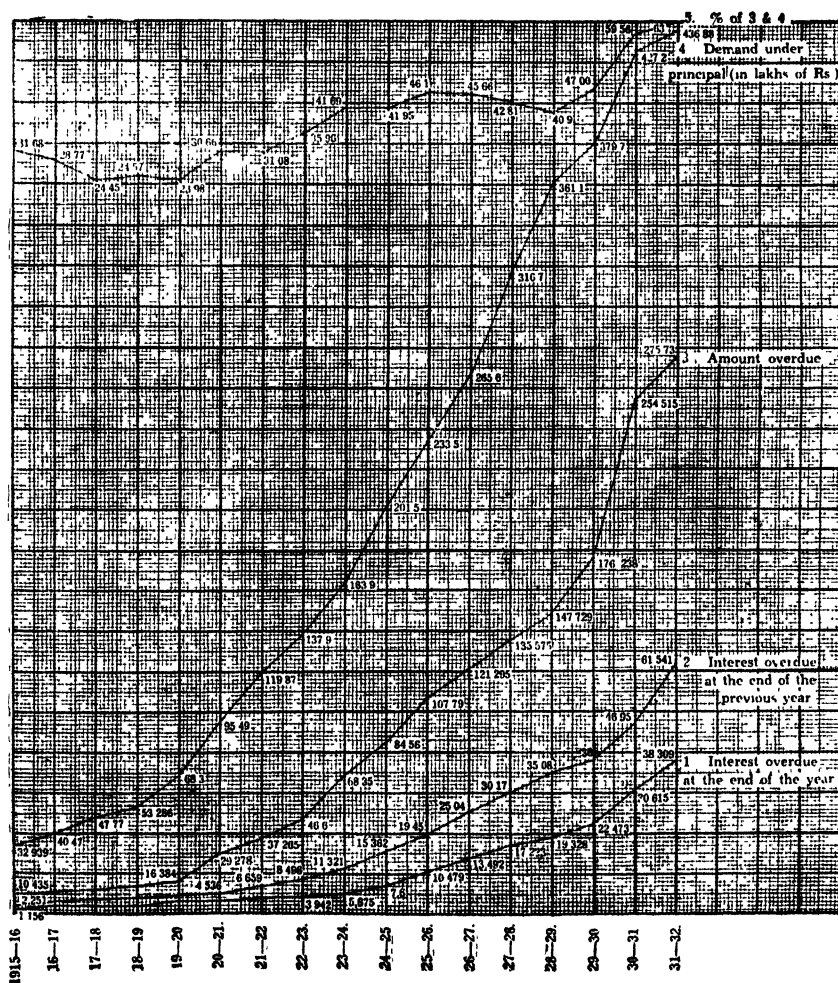


SCALE:

1. 1 Div. represents 10 societies.
2. 1 Div. " 100 societies.
3. 1 Div. " 100 societies.
4. 1 Div. " 50 unions.
5. 1 Div. " 2 societies.

Graph showing :—

1. Demand under principal in the year in lakhs of rupees.
2. Amount overdue.
3. Percentage.
4. Interest overdue at the end of the previous year.
5. Interest overdue at the end of the year.



SCALE :

1 & 2. 1 Div. represents 10 ?

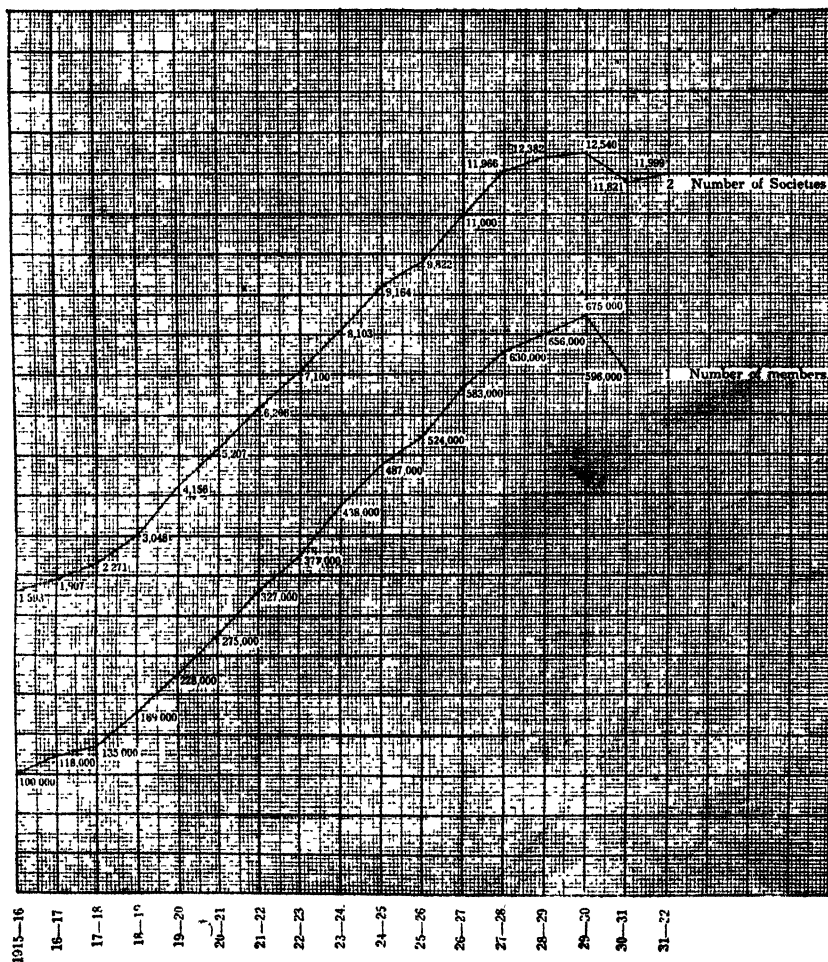
3 & 4. 1 Div. " Rs. 20 lakhs.

5. 1 Div. " 10 per cent.

N.B.—Nos. given to curves do not correspond with the Nos. given at the top).

Graph showing :—

1. Number of Members.
2. Number of Societies.

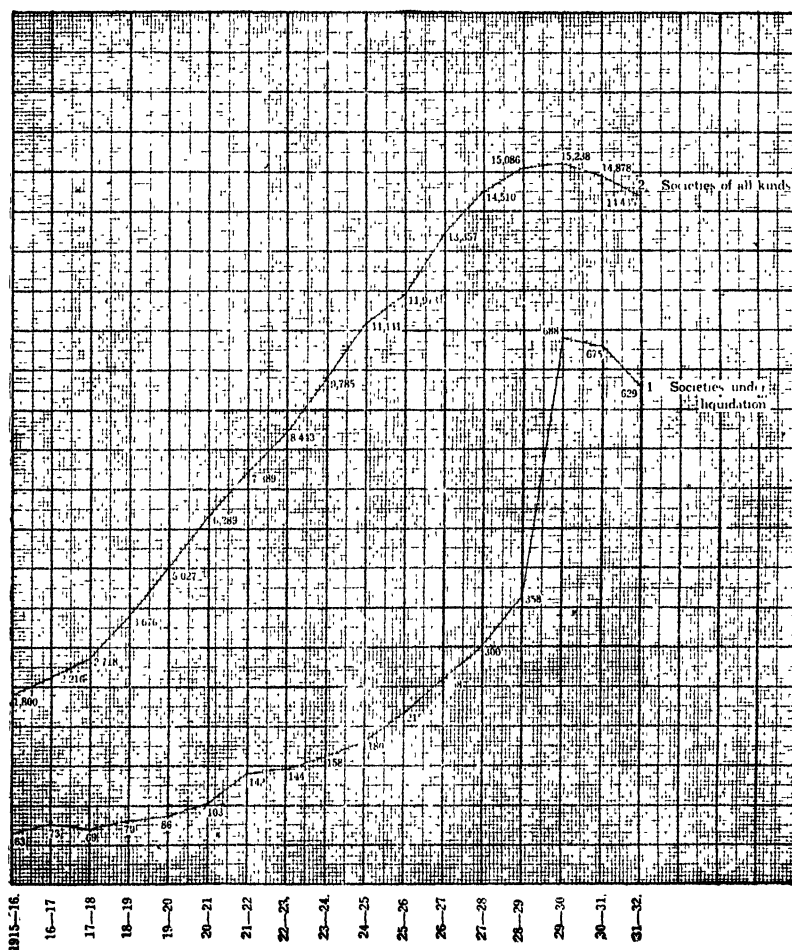


SCALE :

1. 1 Div. represents half million.
2. 1 Div. „ 1,000 societies.

Graph showing :-

1. Societies under liquidation.
2. Societies of all kinds.



SCALE :

1. 1 Div. represents 50 societies.
2. 1 Div. „ 1,000 societies,

THE PROBLEM OF RURAL INDEBTEDNESS

BY

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I. The Need for Agricultural Relief.

Depression is necessarily a period of hardship for the debtor classes in the community; it leads to an unjust redistribution of wealth. While the creditor gets a premium, the debtor gets a penalty in that he has to return a much larger purchasing power than he received. Two principal depressions occurred in India during the 19th century, the first in 1820—54 and the second in the sixties. But neither of these apparently affected the country as much as the present depression; nor were they so widespread. During the first period, India was not so dependent on foreign trade as now, and the second depression affected chiefly the cotton tracts. Further, the general price-level never seems to have fallen so rapidly and drastically as between 1929 and 1932. The result is that all debts have increased in quantity as well as in burden. Since 1930, borrowings have been fewer, but the bulk of the older debt remains unpaid. According to an estimate made by the United Provinces Agricultural Debt Enquiry Committee, only 7 per cent of the long-term debt and 25 per cent of the short-term debt had been repaid annually since 1930.¹ The proportions may be more or less true of other provinces. Interest payment has slackened everywhere, and according to all accounts, hardly 20 per cent of the interest due annually must have been paid in the last three years. Calculating on this basis, the total agricultural debt of

¹ The U. P. Government Gazette, September 10, 1932, p. 257.

British India must have increased from Rs. 900 crores to about Rs. 1,200 crores; and that of Madras from Rs. 150 crores to Rs. 200 crores. But this is no indication of the real burden which is much higher. With nearly a 50 per cent fall in the prices of our staple products, the real burden of debt has more than doubled since 1929. The nominal burden of a debt of Rs. 100 raised in 1929 is still Rs. 100 and, if no interest has been paid, Rs. 148, but the real burden is about Rs. 150 and with interest about Rs. 222. If the total debt of British India in 1929 was Rs. 900 crores, and if no repayment of principal was made in the meantime, the real burden of that debt must now amount to about Rs. 1,800 crores, and if all interest is in arrears, Rs. 2,200 crores. On the other hand, the total production in the chief crops has in the meantime diminished from Rs. 1,018 crores (in 1928-29) to Rs. 536 crores (in 1931-32). Thus while the income has greatly diminished the debt has vastly increased.

Such is the problem facing us. But such a problem has been facing most countries, and some of them are even worse off. Two lines of action have been pursued by them. On the one hand, they have resorted to various measures of relief and on the other, attempts have been made to raise prices. The plan of action for raising prices consisted in carrying out public works and devaluating currencies. The public works programme injected purchasing power into the community and revived demand to a great extent. By abandoning the gold standard, several countries have given a prop to export trade and thus kept up prices in the country. Australia, Japan, and Britain have resorted to all these measures, whilst on the continent of Europe, the principal line of action has been carrying out public works and regulating import trade by means of exchange restrictions and import quotas. Had these measures been undertaken on an international scale, great success would have resulted from it, but even by national action countries like Japan and Australia have given considerable relief to agriculturists.

Direct relief has taken different forms. In some countries, Government has given financial assistance to farmers in order to lighten the burden of debt; in others, firm measures have been taken for preventing the loss of indebted farms and for checking the inordinate accumulation of interest.² Thus, the Farm Relief Act of the United States of America provides for the issue of 4½ per cent federal land bonds to the amount of \$2,000 million with the object of making mortgage loans to farmers at 5 per cent in order to enable them to repay existing mortgages carrying higher rates of interest. By this and other measures, a powerful effort has been made by the United States Government to regulate agricultural production and to raise prices with a view to improving the farmers' income, but the recent unrest among farmers indicates that the measures have not been attended with much success. In Italy, agriculturists' debts have been converted into 25 years' mortgages with annual payment for interest and redemption which may not exceed 7½ per cent per annum. In Germany, a law of May 1933 enables debtors to appeal for special assistance in respect of debts entered into before 1931. In Austria, encumbered agricultural property is protected from forced sale, under certain conditions. In several States of Australia, the right of selling mortgaged property has been restricted by legislation and measures have been taken to keep down interest. In these and many other countries, measures have been taken to postpone debt claims, give priority to new loans, convert short-term into long-term obligations, negotiate rent reductions and convert fixed money rents into yearly payments depending upon the value of farm produce. In Holland, courts have been set up to negotiate between agricultural debtors and creditors and compulsory interest reductions have taken place in many countries. In Denmark, country boards have been set up with power to postpone interest and amortisation payments,

² See World Economic Survey, 1932-33, pp. 150-60, 311-15.

making provision for new loans and moratoria of old loans, granting tax relief, limiting interest rates and so forth.³

II. Debt Conciliation in India.

In India nothing spectacular has been done by way of agricultural relief. In most provinces, some part of the land revenue has been remitted or held in abeyance. In the United Provinces, a comprehensive scheme of agricultural relief is contemplated and Bengal may follow suit. The unlinking of sterling from gold in September 1931 resulted in a certain degree of devaluation of the rupee, but this has not produced any great revival of prices. There is a growing desire that a larger measure of devaluation must be carried out as in Australia, so that our export trade may obtain an advantage even over the sterling area, but recent currency experiments elsewhere make one doubt if a slight devaluation—e.g., lowering the ratio to 16d.—would provide any real stimulus to our export trade or serve to raise our internal prices to any perceptible extent. Our export trade has dwindled because of a fall in demand abroad for our goods, and if a real revival is to take place, it cannot be by mere currency manipulations. Further, as only a small proportion of our total production is exported—unlike Australia—it is very doubtful if a slight devaluation would have any tangible effect on our general price-level. A more effective means of reflationg economic activity and thereby reviving prices would be to carry out a large programme of productive public works spread all over the country, so that purchasing power and consumers' demand may revive. This is likely to benefit industry as well as agriculture.

But there are no sovereign remedies for raising prices immediately, and it is useless to expect any immediate relief to indebtedness by such measures of general relief. If our aim is to give

³ See World Economic Survey, 1932-32, p. 159.

some immediate relief to the burden of indebtedness, we must do something more direct. Such direct relief has been provided in Germany, Holland, Denmark and in several American countries. The principal agency used in the settlement of debt is conciliation between debtors and creditors with the object of securing a composition of the standing debt. Nor is this anything new in India. It has been practised in various parts of this country during the last 30 years. In the Central Provinces, debt conciliation was carried out in several districts during the depression resulting from the famine years of 1897—1900. In Orissa a remarkable effort at debt redemption was made by Government between 1906 and 1912; subsequently, in the Punjab, similar attempts have been made in several districts. Since the depression began, the Government of the Central Provinces and the Durbar of Bhavnagar State have carried out legislation for debt conciliation and have launched on comprehensive programmes of debt composition.

The essential feature of the scheme is the appointment by Government of a Conciliation Board, or Commissioner, for adjudicating between the parties. The Board is authorised to go through the whole transaction, and having regard to the nature of the loan, the position of the two parties, and the trend of the price-level since the debt was contracted, they would settle upon the amount to be repaid, and the mode of repaying it. Conciliation may be compulsory or voluntary. In exceptional circumstances, compulsory conciliation might be justifiable, but in provinces where the principal source of agricultural credit is the agriculturist himself such a drastic remedy may not be essential. In Bhavnagar, a majority of the ryots and sowkars of the Mahals must apply jointly if a conciliation board is to be set up, and since most of the Mahals have asked for it, it is clear that the scheme is popular with the sowkars as well. In the Central Provinces, the recent Act authorises the Government to set up conciliation boards in every district; but the concurrence of the creditors to whom 40 per cent of the debts are due is necessary if the case of a debtor is to be

considered by the Board. Nor is the award unconditionally binding on the parties. When settlement is obstructed by the obduracy of the debtor or the creditor, the Board may issue a certificate stating who in their opinion is the unreasonable party. The creditor may then resort to the ordinary courts, but he will not get the costs of his suit, if he is the unreasonable party, and the rate of interest from the date of the certificate will only be 6 per cent per annum.

The method of repayment is the crux of the whole problem. If ready cash can be paid, the creditor would agree to large reductions, but if the amount is to be paid in small instalments lasting over a long period, confidence is lacking and agreement becomes difficult. The chances of ready cash being paid are necessarily limited, and usually the sum is to be paid in instalments, but unless Government or a land mortgage bank undertakes to pay the instalments, settlement is generally difficult.

The redemption of the debt directly by Government is the simplest solution. This was the system tried in Ranchi District during 1906—12. Government advanced about Rs. 1½ lakhs for redeeming debt, but did not proceed with it any further; for, Government soon realised that there were serious difficulties in recovering the amounts advanced on behalf of debtors.⁴

Today, a similar scheme of debt redemption by Government is being put through in Bhavnagar. In that State, the Liquidation Committee is authorised to write off any debt which is more than three times the land revenue assessment. The compounded amount would then be advanced by Government on behalf of the ryot, and Government would recover the amount from the State's share of the produce of each ryot, the lands being held on the *bhaghatai* system. The land revenue and the *takavi* advances are first deducted from the State's share, and the

⁴ Indian Banking Committee Report, p. 64; Behar and Orissa Committee Report, pp. 57-58.

balance would go to repay the State's advances to the sowkar. When there is a bumper crop, the ryot may repay the whole or any part of the loan in a lump sum. Such a scheme of debt redemption has already been carried out in two-thirds of the State which involved the settlement of a debt of about Rs. 60 lakhs. The usefulness of the scheme is evident from the fact that in most cases, the debt amounts have been drastically cut down by the Liquidation Committee. For instance, the total nominal debt of the first five *tappas* taken up was Rs. 14,19,378, but it was compounded by paying the sum of Rs. 3,67,991, thus reducing the burden of debt by full three-fourths. The annual interest charges alone had amounted to that sum and therefore by paying a year's interest charge the ryot would be totally freed from debt. At the same time, the sowkars are also benefited, in that they are able to recover in cash, and at one stroke, far more than they could if left to their own devices. The success of the experiment is clear from the fact that land revenue and customs receipts have increased in the current year. It must be remarked that all this was possible by the bold generosity of the Maharaja and the wise statesmanship of Sir Prabhasankar Pattani.

Whether the Durbar will be able to recover from the ryots the amounts advanced on their behalf remains to be seen, but the peculiar conditions of the State, especially the *Bhagbatai* system of sharing produce between Government and the ryot, may facilitate repayment. But what is possible in a small State like Bhavnagar, with only half a million people, may not be practicable throughout the country.

III. The Role of Land Mortgage Banks.

The proper agency for the settlement of the compounded debt is the co-operative land mortgage bank. Its large resources, its system of equated payments and the guidance and protection it receives from the State will enable it to undertake such a function

satisfactorily. The failure of early experiments at debt conciliation in India was due to the lack of such an agency. With such banks willing to undertake repayment, creditors would readily agree to make substantial reductions in their claims.⁵ Indeed the land mortgage banks may not be able to undertake such a duty in the case of all landholders. They can only take up the debt of those who own land, which in extent and quality is ample to produce an annual net income adequate to meet their instalments, but this is not the case with a large number of agriculturists. Indeed if the creditors' demands are substantially cut down, more of the ryots can be brought within the category of those qualified to receive help from the land mortgage banks, but even after pushing up such persons, there would still remain many whose only salvation lies in insolvency. Further, in order to be so useful, the land mortgage banks must agree on equated payments spread over a long period of time, so that the annual instalments may not be found too heavy in periods of low prices. A system of graduated payments may also be advisable in view of changes in seasons and in price-level. In Europe, loans for 50 years may not be uncommon, but in the conditions of India there are various difficulties in spreading out repayment for so long a period. However a period of 20 to 30 years cannot be too long even for India, provided the security is good.⁶

Further, the co-operative primary land mortgage banks cannot serve the needs of the larger landowners and zamindars. At present land mortgage banks do not lend more than Rs. 5,000 to a single person, whatever his security. The necessity has therefore arisen for the establishment of land mortgage corporations on the joint stock basis, which could command extensive funds and are

⁵ Banking Committee Report, p. 64.

⁶ The Central Banking Committee recommends that 'for the present the maximum period should be twenty years. We hope that with sound management the banks should be able to extend the period to thirty years, if necessary,' (p. 169).

able to help the larger landowners. Dawson's Bank of Burma is today the only joint stock bank of that kind in this country, and this is precisely the time when more of such banks should arise. We may learn much from the experiences the *Credit Foncier* of France, the *Hypothek* Bank of Japan, and most of all from the English Mortgage Credit Corporation, which was established in 1928. The leading joint stock banks of England are shareholders of the Corporation, and Government is authorised to advance an amount not exceeding £750,000 for establishing a guarantee fund, and this is to be free of interest for 60 years. As the period of repayment of loans is spread over a maximum of 60 years, this institution can render substantial aid to indebted landowners.

However thorough the work of conciliation boards and however generous the agency entrusted with debt redemption, a large number of landholders will have to give up their lands and look to some other means for maintaining themselves. Indeed there is a strong public opinion for exempting from sale the property indispensably necessary for the maintenance of the insolvent's family. The Civil Procedure makes some provision for it, and both the Royal Commission on Agriculture and the Central Banking Committee strongly recommend an enhancement of this provision. The Royal Commission, while recommending a simple Rural Insolvency Act suggests that 'just as creditors have a right to insist that all debtors' assets should be impounded and applied towards the payment of the debts, so also the debtor should have the clear right to be allowed to earn his living if he can and to be free to make a new start in life.' Indeed if the property so left is sufficient to maintain the family, it may be economically advantageous, but if it is not, as is likely, such leniency would do no real good to the debtor or the community. The best solution for the problem would be to enable such persons to migrate to new land or to industrial centres, and thus not only will they be enabled to start life afresh but the pressure on land can be lessened and the over-crowding in the countryside diminished. For this purpose,

a colonisation scheme under State aegis must be carried out, wherever debt conciliation is put through. Such colonisation has been successfully carried out recently in Germany, Italy and Canada, and the burden of the scheme is shared between the State, municipalities, land mortgage banks and voluntary associations. All migration need not be within the country; rather in the present circumstances, it would be worthwhile sending out colonists to new lands, so that the rural congestion may be diminished.

IV. Preventive Measures.

To extricate agriculturists from indebtedness without guarding against a relapse into debt is a sheer waste of effort. Let all debt be wiped out by a fiat of Government to-day, and tomorrow debt will be born again and will soon grow into its former size—provided those who have money to lend have not been scared away in the meantime by the arbitrary action of Government. It is foolish to think that agricultural indebtedness can be cured by merely extinguishing the existing debt. The only effective means of controlling debt is to fortify the agriculturist against future debt. This cannot be done effectively by keeping a strict watch over money-lenders, nor by lowering rates of interest, but it can be done, to a great extent, by adopting a system of rural credit which is self-liquidating. If, for instance, the bulk of the rural debt is raised for productive purposes and if a careful distinction is made between long-term and short-term purposes, and if short-term credit is in such amounts as can be repaid at the following harvest and if long-term credits are raised from land mortgage banks or similar institutions which allow equated or even graduated payments of convenient size, then debt can be kept under control and indebtedness can be greatly reduced. The co-operative society was expected to cure debt, but it has proved itself incapable of doing so, greatly because the co-operative society attempted to do mainly the work of lending money. If co-operation is to keep down indebtedness it must be able to fulfil a more comprehensive purpose. It must

first and foremost increase the income of the ryot by better tillage and better marketing, and must curb social expenditure, and inculcate thrift. Loans must be given for productive purposes and in such form and manner as to be so used; and when the harvest is gathered, the society itself must take charge of the produce and market it in the most profitable manner and pay interest and taxes. To avoid grain loans from usurers at high rates of interest, the co-operative society must itself conduct a grain bank, on the lines of the grain *golas* of Chota Nagpur.⁷ By such a policy, the ryot is assured of a more stable income; and the society is assured of punctual repayment. Such co-operative experiments have already been made in different parts of the country, and it is time their experiences were garnered, so that a new co-operative policy may be devised for the whole country.

The best way of fortifying the ryot against debt is to increase his income, and cure him of his improvident ways; but in some countries efforts have been made by legislation to insure property against incumbrance and consequent alienation. The system best known in India is that of non-alienability of land, and this obtains in the Punjab, Bundelkhand, the Central Areas and parts of Central Provinces. The Punjab Act of 1901, on which others are modelled, forbids the alienation of land to non-agricultural tribes. Its object was to fortify the agriculturist against alienation, but that has not been secured, seeing that the Act has stimulated the rise of a growing class of agriculturist moneylenders; it is curious to note that moneylenders have newly arisen even among the Gonds of the Central Provinces. As land can pass only to agriculturist classes, agriculturist moneylenders are always willing to advance larger sums on land security than the non-agriculturist moneylenders, and this has only facilitated land transfers from peasants to large landowners. On the other hand, the credit of the ryot has been restricted, and unless such impediments to the free transfer of

⁷ B. & O. Banking Report, p. 119.

land are removed, non-agriculturist lenders are bound to demand high rates of interest and land mortgage banks will not be able to operate freely, nor raise their working capital through debentures on reasonable terms. The Indian Banking Committee has therefore recommended that Land Alienation Acts should be modified if land mortgage banking is to develop rapidly.⁸

On a different footing are laws made to ensure a minimum holding to agricultural families. As is well-known, in a country which depends so little on non-agricultural occupations, an increase in the number of landless agriculturists is attended with many serious social and economic consequences, and it would certainly be desirable to prevent agricultural families from losing at least such portions of their property as are essential for their shelter and maintenance. Hence the 'Homestead' Law of the United States of America, the 'Heimstätten' laws of Central Europe and the 'Five-Foddan' law of Egypt. In those countries, such minimum holdings are also protected by law from being subdivided.

There is no doubt that such a policy would be desirable for India also, but there are various difficulties standing in the way of its adoption. As already shown, the *per capita* holding of land among agriculturists is very small and even if we take the cultivating owners and tenants, the average holding is only $4\frac{1}{2}$ acres. Indeed it would be exceedingly difficult to define an 'economic' holding, but except in the wet tracts and where special commercial crops are grown, even a holding of five acres may be uneconomic, and therefore if law insists on 'economic' holdings, it would involve the rise of a landless proletariat, which must be a grave social menace in a country where trade and industry are so little developed. Nor is there much land fit for colonization in many provinces. It would also lead to much family strife and litigation and in this the example of Continental Europe is rather a warning than an encouragement. Inalienability of holdings would restrict

⁸ Report, pp. 175-76.

credit and lead moneylenders to resort to worse means of exploitation. Above all, it would go against the social system of Hindus and Muhammadans, and only a powerful Government could carry out such radical reforms.⁹

However, considering the evils of frequent land-alienations, something must be done to prevent family property from being alienated, and with growing opportunities for trade and industry in the country and with the increase of migrations, the possibilities for making a minimum holding inalienable may grow stronger and it may soon become necessary to carry out legislation in the matter.

Other methods have often been proposed for checking the growth of mortgage indebtedness and for preventing land from passing hands frequently. This subject raised a controversy in Europe 30 years ago, and from it arose the idea of incorporating all landed property in a district and making future borrowing dependent on the common consent of all landowners. Schemes were proposed for this purpose by Robertson, Baron Von Vogelsang, Lorenz Von Stein and Schaeffle. The formation of such corporations of landed proprietors may indeed help in lightening debt burdens and for preventing property from passing hands among individuals, but it could not prevent property passing to the Corporation itself. That would result in the conversion of owners into tenants and labourers, and they could never hope to rise to their former status.¹⁰

The fundamental weakness of all such measures which discourage alienation of land is that they go against the grain of human nature. The incentive to enterprise to-day comes from the possibility of hardworking small-holders becoming substantial landowners in course of time. What the lazy and improvident

⁹ On these same grounds, attempts at remedying the subdivision and fragmentation of holdings are likely to meet with opposition. See Royal Commission on Agriculture, Report, p. 137.

¹⁰ Boyazoglu, *Agricultural Credit*, pp. 158—62.

landlord loses, the thrifty and hardworking peasant gains, and society does not lose by such changes. Nothing is gained by keeping landed property in a few hands all the time. The law of life is change, and as things are to-day, to prevent change may mean stagnation. Indeed too frequent transfers of land may be an evil, especially in a country so greatly depending on agriculture; but while remedying that state of things, we need not go to the opposite extreme of rewarding incompetence and penalising enterprise.

V. Conclusion.

The remedial action suggested in this paper may now be summarized. In all parts of the country where indebtedness is a serious problem—and this is to be decided by local enquiry—a scheme of debt conciliation must be carried out under the immediate supervision of Government. It will be found that a certain number of agriculturists can be redeemed from debt by their giving up part of their land or by land mortgage banks taking over their debt and receiving from them convenient instalments spread over a number of years. In the case of many of those people whose property is not sufficient to redeem their debt even after it has been cut down by the conciliation board, the best solution would be for them to give up their land and migrate either to industrial centres or to new lands awaiting colonization. For this purpose, a migration scheme under Government control must be carried out, with the aid of local bodies and charitable associations. Working hand in hand with this, there must also be a plan of rural development, which would make provision for an improved system of rural credit. To all who have been redeemed from debt and to others who want to avoid debt, the co-operative society and the land mortgage bank must be the principal agencies of credit. All short-term credit must be supplied by the co-operative society, and it must be a charge on the borrower's produce. The society must market the produce, and from the sale proceeds, it must pay its

own dues and the instalments of the land mortgage bank, and if possible even the land revenue. Wherever necessary, the society must conduct a grain bank for helping ryots in times of scarcity. Loans for unproductive purposes must be strictly limited and must on no account be larger than the borrower could easily repay at the following harvest. A vigorous educational propaganda on a nation-wide scale must be carried on for eradicating extravagant social expenditure, and in this the village panchayat may serve as a powerful agency. The co-operative society will not only advance loans but will also work for agricultural improvement, and for this purpose every society must obtain advice from expert guides who may be appointed by District Boards or other local bodies. This may also be a means of regulating agricultural production with an eye to the requirements of Indian industries and export trade.

Thus the scheme of debt redemption must be an integral part of a planned rural development and must include (1) debt conciliation, (2) emigration from congested areas, (3) establishment of co-operative societies in every village, and land mortgage banks in larger territorial units, (4) a system of co-operative marketing, and (5) above all, a concerted move for agricultural improvement. The scheme must be put into operation as a whole, and it may do little good if one part is detached and given effect to. To redeem people from debt without devising means for avoiding future debt will be of no great use. Similarly to talk of agricultural improvement when the agriculturist is loaded with a heavy burden of debt is futile. The preventive as well as the curative treatment must be put through simultaneously.

However, let us not be inactive, because time is not ready for putting into operation a comprehensive scheme. As the Royal Commission on Agriculture wrote, 'the worst policy towards debt is to ignore it and do nothing.' This is particularly true of the present time. There has been an unprecedented rise in the value of money, and this has hit the debtors hard. A large number of agriculturists have been plunged into the slough of despond by the

unbearable burden of their debt. Such a situation should be carefully handled. The Macmillan Committee Report says: 'A study of history, we believe, confirms the opinion that it is in the changes in the level of prices, and in the consequential alteration in the position of debtors and creditors, entrepreneurs and workers, peasants and the tax-gatherers that the main secret of social trouble is to be found.' Indeed the situation may not have become menacing in most parts of India, but when moneylenders begin to foreclose, it is possible that widespread social unrest may arise. Political unrest is bad enough, and to aggravate it by social discontent is dangerous. The following words of Lord Morley have a special meaning just now:—'Great economic and social forces flow with tidal sweep over communities only half conscious of that which is befalling them. Wise statesmen are those who foresee what time is thus bringing and try to shape institutions and to mould men's thought in accordance with the change that is saliently surrounding them.'

प्रक्षालनादि पङ्क्त्य दूरादस्पर्शनं वरम् ॥

AGRICULTURAL SERFS IN SOUTH INDIA AT THE ADVENT OF BRITISH RULE

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Serfdom characterised the greater part of the labouring classes of the land. In Malabar and Canara where the land had gradually become the subject of distinct properties, the labourer was regarded as the personal slave of the occupier of the soil and liable to be sold and mortgaged by him independently of his lands. In the Tamil districts he was attached to the soil and had even a claim to hereditary landed property as the incident of his status. In the Telugu region the institution seems to have been very weak. But in all cases serfdom was always domestic and never the subject of foreign traffic. As long as the land-tax was moderately assessed, the proprietor could afford to maintain serfs to cultivate for him. When the tax was raised, it became necessary for the farmer to work on the land, often with the help of his family; and as a consequence serfdom is believed to have declined to a considerable extent.¹ It is a well-established fact that serfs used to claim hereditary landed property as an incident of their servile status.

Malabar.

It was only in Malabar that the Cherumars who performed the bulk of agricultural labour, were regarded as the absolute property of their lords; they could be employed in any work that their masters were pleased to set for them, were not attached to the soil and could be sold and transferred in any manner. The only

¹ *Manual of the Administration of the Madras Presidency, 1885, Vol. I, p. 112, Note 1, para 3.*

restriction as to the purchase and sale of these serfs was that the husband and the wife could not be sold separately; but children could be separated from parents and brothers from sisters. The serfs were of different castes, like the *Vallan*, *Kanakan*, *Erlay*, etc.; and the differences in the customs by which the marriages of these were regulated, formed the basis of a considerable variation in the right of the master to the children of his slaves. The industrious and observant Dr. Buchanan who visited Malabar in the last quarter of 1801, thus remarks on their wages and condition²:—

“ The master is considered as bound to give the slave a certain amount of provisions; a man or woman while capable of labour, receives two *edangalls* of rice in the husk weekly, or two-sevenths of the allowance that I consider as reasonable for persons of all ages included. Children and old persons past labour get one-half only of this pittance; and no allowance whatever is made for infants. This would be totally inadequate to support them; but the slaves on each estate get one-twenty-first part of the gross produce of the rice, in order to encourage them to care and industry. A male slave annually gets seven cubits of cloth and a woman fourteen cubits. . . .

“ There are three modes of transferring the usufruct of slaves. The first is by *jennum* or sale, where the full value of the slave is given and the property is entirely transferred, to a new master, who is in some measure bound by his interest to attend to the welfare of his slave. A young man with his wife will sell for from 250 to 300 *fanams* or from £6-4-1½ to £7-8-11½. Two or three young children will add 100 *fanams* or £2-9-7½, to the value of the family. Four or five children, two of whom are beginning to work, will make the family worth from 500 to 600 *fanams* or from £12-8-0 to £14-17-11. The second manner of transferring the labour of slaves is by *canum* or mortgage. The proprietor receives

² A Journey from Madras through the countries of Mysore, Canara and Malabar, 1807, Vol. II, pp. 370—72.

a loan of money, generally two-thirds of the value of the slaves; he also receives annually a small quantity of rice, to show that his property in the slaves still exists, and he may resume this property whenever he pleases to repay the money borrowed, for which in the meanwhile he pays no interest. In case of any of the slaves dying, he is held bound to supply another of equal value. The lender maintains the slaves and has their labour for the interest of his money and for their support. The third manner of employing slaves is by letting them for *patom* or rent. In this case, for a certain annual sum, the master gives them to another man; and the borrower commands their labour and provides them with their maintenance. The annual hire is 8 *fanams* (3s. 11½d.) for a man and half as much for a woman. These two tenures are utterly abominable; for the person who exacts the labour and furnishes the subsistence of the slave, is directly interested to increase the former and diminish the latter as much as possible. In fact the slaves are very severely treated; and their diminutive stature and squalid appearance show evidently a want of adequate nourishment."

According to Buchanan, five families of slaves, probably numbering 24 persons of all ages, are adequate to cultivate 200 *porays* of rice-land, which according to his estimate was a little more than 35 acres; and they required five ploughs and ten oxen. He would advise the West India planters to adopt the Malabar custom of allowing female slaves to marry and thus to induce the negro slaves to breed and avoid having recourse to an annual importation from Africa of slaves.

European plantations in which good wages obtained, had a marked effect in releasing the serf-class from some of its bonds. Conversion to Islam has had also the result of freeing the serfs from some of their former burdens. In the very first year of the British occupation of Malabar (1792), a proclamation was issued against dealing in slaves. A person offering a slave for sale was to be punished as a thief; the slave was to be forfeited; and his

seller was to be fined five times his value, similar punishment being meted out to the purchaser as well. Fishermen and Mappillas conveying slaves were to be flogged and fined at the rate of Rs. 10 for each slave conveyed; while the vessels used in trade, except the fisher-boats, were to be confiscated. But this proclamation was not to prevent the privileged superior castes from purchasing the children of famine-stricken parents, as had been customary, but subject to the condition that the parents might repurchase their children, as had also been the practice. The measure itself was directed specially against slave-stealing by robber-bands who easily disposed of their captives to the agents of vessels sailing from Mahe and Cochin to the West Indies. Agristic slavery received the attention of the Government only in 1819 when Mr. Warden, the Principal Collector, wrote an interesting report on the condition of the Cherumar and the practice of selling slaves for arrears of revenue was prohibited. The Court of Directors, in their despatch of 12th December, 1821, expressed dissatisfaction at the lack of precise information that had been given to them about the condition of the cultivating serfs. It was only in 1836 that the slaves on the Government lands in Malabar were emancipated; but this was done in a cautious manner so as "not to create any unnecessary alarm or aversion to it on the part of other proprietors or premature hopes of emancipation on that of other slaves." The Collector had indeed to report, in 1842, that the slaves had increased in numbers from 144,000 in census 1835 to 159,000 in census 1842 and that "no gradual extinction of slavery is really going on in Malabar." The Court of Directors sent out orders in 1842 for the entire abolition of slavery; and in a subsequent despatch of March, 1843, they called the special attention of the Government of India to the question of slavery in Malabar where the evils were so aggravated "as compared with other portions of India." This led to the passing of Act V of 1843, by which the right or claim of any person claiming a slave as *jenmam*, *kanam*, or *pattam* would not be investigated into at any of the public offices or courts; and

Government made it clear that it would not interfere with the slave's inclination as to where he wished to work.

Tanjore.

The *Pannaiyals* of Tanjore, working the *pannai* or home farm of the landlord, were serfs attached to the soil and transferred from one master to another along with the land. "They seem to have been frankly slaves when the English came into the possession of the country, and many relics of the former state of things still existed." From the report of the Tanjore Commissioners, made on the assumption of the administration of the district by the Company in 1799, we read that the status of the *pannaiyals* of former days was slavery; and that the landholders bought and sold them to one another as they did their cattle, the price of a slave then current having been about 20 *chakrams*, equal to a little over Rs. 31. The number of agricultural serfs seems to have been largely diminished by the devastation of the country at the hands of Haidar Ali in 1781. According to the Tanjore Commissioners, "many are known to have starved, others to have been driven away to the enemy's country; and not a few to have engaged with the Europeans as sepoy, horse-keepers, etc.; so completely however are they dispersed that some Mirasidars declare that they do not now possess more than one slave or Pallar in villages where they formerly maintained thirty or forty." Though there was such a sweep of the labourers of the region, the necessities of the Mirasidars called forth "in larger numbers than ordinary all the inferior classes of Malabars (Tamils) and Gentus (Telugus) who, under the name Payakaras undertake the cultivation of the village, and being paid in proportion to the fertility, and of course being interested in the produce of the soil, the labour they perform is considered fully equal to that of double the same number of slaves. "In this way," the Commissioners added, "emigrants from other countries are accommodated with a livelihood as Payakaras and thus it is that the landholders of a village are able sometimes to cultivate in

full and at others only a part of the Sarkar lands; but this is more prevalent in those villages where the Brahmins are the Mirasidars, whose prejudices prevent them from partaking but in a small degree, in the labours of the field and render them dependent on their slaves or external aid.”³

The *payakaras* or *purakudis* (outside tenants) had certainly a better status. In the *purakudi* cultivation, the tenant provided the required seed and ploughing stock and received a certain share of the outturn. Both the *pannaiyal* and the *purakudi* were allowed sites for their houses and backyards, free of rent; while an advance of money without interest was made to the former in order to enable him to build his house. The ordinary daily wage of an able-bodied predial labourer was about $\frac{3}{4}$ of a *marakkal* of paddy; i.e., nearly 4 lbs., which would give about 2½ lbs. of clean rice. The rate for female labourers was the same. These rates applied only to labourers who were permanently attached to the mirasidars or were expected to become so attached.

The status of the *purakudi* cultivator at the beginning of the 19th century, in the Tanjore kingdom was thus explained by Lieut.-Colonel W. Blackburne, Resident at Tanjore, in a communication addressed to Lord William Bentinck, Governor of Madras, on the 27th December, 1804:

“The Poracudis are the labourers of the soil under the particular appointment and orders of the mirasidars. Their name signifies foreign labourers. They are the servants of the mirasidars, serving for stipulated wages, sometimes receiving cash, but generally a proportion of the crops, as a spur to their diligence and labour. The mirasidar has a perfect right to discharge them for misconduct or when he no longer requires their services. No government in Tanjore antecedent to Mr. Harris’s, ever interfered between the mirasidar and the poracudi, unless to compel the

³ Extract quoted in T. Venkasami Rao’s Tanjore Manual, 1883, p. 390.

performance of their voluntary agreements with each other. The poracudi was responsible to the mirasidar alone for everything relating to cultivation. The mirasidar alone was responsible to Government which neither enquired nor cared whether he cultivated his land by the labour of slaves, the labour of himself and his family or the labour of poracudis. Mr. Harris endeavoured to raise the poracudis from the state of servants to that of equals and rivals to the mirasidars. He augmented and fixed uniformly their percentage and seemed latterly to consider them as entitled to equal privileges with the mirasidars. . . . ”⁴

Chingleput.

In the Jaghir District of Chingleput (which was obtained by the English from the Nawab of Arcot by grants of 1750 and 1763 and was finally taken over by the Presidency in 1780), the system of agristic slavery existed, the slaves being given a prescribed grain allowance and a proportionate subsistence for each of their children or others of the family. The system seems to have been founded originally on contract; it made provision for the housing and clothing of the serfs as well as for certain allowances to them both in money and in articles; and their marriages were performed at the expense of their masters.

According to the Proceedings of the Board of Revenue, dated 25th November, 1819, “the condition of this description of the people, composing the chief part of the Pariahs of the district, had, of late, considerably changed, in consequence of the vicinity of the town of Madras where many of them obtained employment and their proprietors found it difficult to reclaim them.” The *payakaras* seemed to have been fairly well off; and some of these acquired a sort of life-estate in the *mirasi* lands which they cultivated and were called resident *payakaras*.

⁴ Three Treatises on Mirasi Right, by F. W. Ellis and others, 1832, pp. 118-20.

The Southern Districts.

In the southern Tamil districts, slavery was prevalent undoubtedly. It was usual for the slaves to be sold and mortgaged, either with the land or separately, at the pleasure of the proprietor. In Tinnevely they were afforded subsistence only on the lowest scale, generally no more than 2 measures of paddy daily on working days. They were given small presents on the usual occasions of marriages, deaths and festivities, and were entitled, at the harvest time, to a small deduction from the gross produce, which generally amounted to $2\frac{3}{4}$ per cent. In the Trichinopoly region, the Board of Revenue estimated in 1819 that the number of slaves amounted to 10,600. They were usually sold with the land and sometimes mortgaged and were supposed to be fed by their masters in sickness and in health. They were given small presents at the principal festivals and they were married at the expense of the mirasidars. The quantity of land cultivated by a slave was of an extent capable of yielding 150 kalams of paddy. He was entitled to yearly emoluments amounting to $30\frac{3}{4}$ kalams of paddy and money gifts of about Rs. 9 and $1\frac{1}{2}$ fanams.⁵

The Central Districts.

In Salem there was discovered no vestige of slavery at the time of the Board of Revenue's survey (1819); "nor had any such practice obtained from the time the district came into the possession of the Company." According to the testimony of Dr. Buchanan, there prevailed two modes of employing agricultural labourers in Bhavani and other parts of the Coimbatore district at the close of the 18th century. There were first the *padiyals* who were on the same footing as the *Batigas* of Karnata and who bound themselves occasionally for a number of years. In such cases the masters advanced money for their marriage expenses and recovered

⁵ Srinivasaraghava Iyengar, *Progress of the Madras Presidency during the last Forty Years, 1893*, p. lxix.

it by small instalments from their pay. Unless they were tied down by some such stipulation of this kind, the labourers could and did change their service whenever they pleased. The *padiyal* was generally hired by the year; but if he contracted a debt with his master, he could not quit the service till that was discharged. He was seldom at liberty to go away, as he was generally advanced money for marriages and other expenses.

Canara.

In the South Canara District and the adjoining portion of Malabar, cultivation was carried on by *Coolialu* (or hired servants) and *muladalu* (bought men or slaves). At the end of the year the hired servant might change his service, if he be free from debt; but this was seldom the case. When he got deeply involved, his master might sell his sister's children in lieu of the discharge of the debt, or transfer his services to another man who might choose to take him and pay his debt to his master. "In fact he differed little from a slave, only his allowance was larger, but then the master was not obliged to provide for him in sickness or in old age." A male slave was paid daily $\frac{2}{3}$ of the allowance of a hired servant; and a woman slave was entitled to $\frac{1}{3}$ of it. Small allowances were given to them, in cash, oil, salt and seasonings. A good slave sold for 10 pagodas (i.e., about 4 guineas). When a slave wished to marry he received 5 pagodas (2 guineas); and his wife worked along with him. On her husband's death, if she was a slave, all the children belonged to her mother's master; but if she was formally free, she and all her children belonged to her husband's master. The slave was usually hired out and the renter had to find his subsistence. They were also mortgaged; but the mortgagor was not obliged to supply the place of a slave who died, when in his service; and in case of accidents, the debt became extinguished. Free men of low caste, if they were in debt, or trouble, sold their sister's children who were their heirs. In North Canara which was then attached to the southern portion, a

few slaves existed; but most of the labour on land was performed by the owners or by hired servants. The latter seldom received any money in advance and were at liberty to go away at the end of the year without any warning. As for the slaves they got no money except at marriages; and the woman who was thus purchased and all her children became the property of her husband's master.

Conclusion.

It was only in the Telugu districts that the institution of pre-dial slavery seems to have been absent for the greater part. On the whole, the condition of the agricultural serf was not very bad. According to the Board of Revenue's report, the slaves of Malabar were "in more comfortable circumstances than any of the poorer and lower classes of natives." Everywhere they enjoyed a right to be taken care of in old age and sickness and to be married at the expense of their masters. In the Trichinopoly and Canara regions, we are definitely told that they were not treated harshly nor subjected to any cruel punishments. This estimate was perhaps due to the absence, in the treatment of slaves, of torture, such as was largely practised for the enforcing of revenue demand and of police authority which reached such a height as to call for the appointment of a Commission in 1855 for "the investigation of alleged cases of torture in the Madras Presidency." Dr. Buchanan however noticed a marked severity of treatment and under-nourishment in the cases of the *kanam* and *pattam* slaves in Malabar; and he wrote that there could be no comparison between their condition and that of the slaves in the West India island, except that in Malabar there were a sufficient number of females; and he recommended this custom to the West India planters.

ECONOMIC CONDITIONS IN MAHARASHTRA AT THE ADVENT OF BRITISH RULE

BY

PROF. V. G. KALE, M.A.

We fortunately possess a good deal of authentic evidence to indicate to us the economic conditions of the Mahratta country at the advent of British rule. Elphinston's Report on the Territories Conquered from the Peshwas gives, in a systematic manner, considerable information relating to the administrative system of the Mahrattas, and similarly, reports of land revenue settlement and other officers throw some interesting light on this subject. More important and instructive than these, however, are the original documents which are preserved in the Peshwas' Daftar at Poona and which supply a variety of information about the social and the economic life of the people in Maharashtra. The Peshwas' Diaries are a mine of such information and some selections from the Satara Rajas' and these Diaries have been published. These and some papers preserved in the archives of some old families, are a rich source of knowledge of the conditions in this part of the country before and after the advent of British rule. The political and the administrative aspects of this information have received some attention at the hands of students of history but the economic side has been sadly neglected, Ranade's paper written nearly thirty-five years ago on the basis of the Peshwas' Diaries giving us only a glimpse of the subject.

An important fact must be noted at the very outset. Conditions in the different parts of the country at the advent of British rule must have been disturbed to a degree and therefore abnormal, and one has to be extremely cautious in drawing conclusions in

respect of the standard of living of the mass of the people, the system of taxation and the state of trade and industries. There was internecine warfare going on for years in the Mahratta country, which was bound to throw the life of the community out of gear; and added to this source of disturbance, were the Mahratta wars with the British, which ultimately ended in the establishment of their rule in the whole territory under the authority of the Peshwa. We know what effects wars, and particularly prolonged political struggles, have on the economy of a community; and what was worse in the case of Maharashtra in the closing years of the eighteenth century and the beginning of the nineteenth, there was serious maladministration and consequent political, social and economic demoralisation. This background of the picture has to be kept steadily before one's eyes in forming an estimate of the economic condition of the people during the disturbed times.

As is to be expected, Poona, the capital of the Empire, attracted people of influence, status, and wealth and was a busy hive of trade and industries. Here we see luxuries and comforts enjoyed by the upper classes and giving employment to artisans on a large scale. Detailed accounts of the presents exchanged by the Peshwa and the expenses incurred on account of social and religious ceremonies are available in the Diaries, and they give us a fairly good idea of the large part which gold, diamonds, pearls, fine silks and gold-embroidered cloth played on these occasions. It was the patronage of the aristocracy which encouraged and maintained skilled artisans and their crafts. The larger towns, which were distributing centres for rural areas, focussed trade and industries and afforded employment to the artisan and working classes. The wants of the mass of the population were simple and every town and large village had its contingent of artisans and craftsmen to supply them. From the lists of these we have on record, the variety of the trades and industries in which people engaged themselves and the coordination between rural and urban occupations which prevailed, are quite evident.

But the real life of the people was, of course, lived in the villages. Here, the peasant proprietor was the centre round whom that life moved. This 'Mirasdar' was a peculiar feature of the rural life of Maharashtra. The practice of the rulers of alienating land revenue and the State lands themselves, by way of Jagirs and Inams, had indeed become very common, and a class of landlords had grown up who cared only for their rents. The kind of tenure created by this system was highly prized by the recipients and keenly hankered after. The peasant proprietor who enjoyed a special status in the eyes, both of government and people, was, however, considered, quite in the Physiocratic fashion, to be the true creator and dispenser of wealth. He paid mostly in kind for the services of the village artisans and servants. The "balutedars" and "alutedars" were a peculiar feature of Mahratta village organisation. The services of village officers, of artisans and dependents were remunerated by the landholders in this fashion and the use of money had not fully established itself in rural areas. There was, no doubt, a growing tendency for money being employed in the payment of wages and the prices of commodities; and taxes, which used, in the past, to be collected partly in kind and partly in cash, were now almost invariably received in the latter way. But the ordinary exchanges still continued to be effected by barter. Communications in the interior of the country were defective and there were few metalled roads. Goods were transported in bullock carts and certain castes specialised in the business of bullock transport, strings of bullocks being employed for the purpose. Traffic in goods and cattle had to pay customs and octroi duties at various places, and these were often farmed out. Since most villages were self-sufficient, internal trade was restricted to certain indispensable species of articles, but grain and other commodities were freely exchanged as specialised products.

There was no uniform currency, the State having licensed a number of mints and the coins issued from them circulating at their intrinsic value. It was only gradually that the British

Government, after they had assumed the reins of administration, began to introduce suitable changes in the latter. They mostly continued the old system and, in course of time, adapted it to their own ideas. Long after the East India Company's rupee had been declared universal, full legal tender, throughout the British dominions, revenue was collected in the old rupee of various mintage. The village headman who collected the taxes, had to engage the services of the local goldsmith to test the quality of the coins; and the cost of counterfeit and light-weight coins had to be borne by the people, the amount of the discount being charged in the shape of a special tax. Gold coins, in which accounts used to be kept in the past, are no longer in use and the rupee is the principal coin. Reckoning is not, however, made uniformly in rupees, annas and pies or pice, but in the accounts of some of the villages I find mention of rupees, four annas and *rais*, one hundred of these last, making four annas. Multiplicity of coins must have presented serious difficulties to the people in their daily transactions where barter was not practicable. Prices were comparatively very low at the time, and copper coins were generally used in ordinary day-to-day transactions. The price of gold was about Rs. 16 per tola and of copper about less than a seer per rupee. An item in the Peshwas' Diaries for the year 1808—09 mentions discount at the rate of one per cent having been paid for converting one kind of the rupee coin into another. Purchases of rice in villages a few miles west of Poona, had to be paid for and it is stated that the "Chhapi" rupee not being acceptable, that coin had to be changed into full-blooded "Chandwadi" rupees. This instance is typical of the state of the currency in Maharashtra at the time we are dealing with here. We have another item in the Diaries on this subject which is clearer still. In 1800—01 orders are issued by government to district officers to the following effect:—"The coin current and acceptable to people in Wai, Satara and Karad is the 'Malakapuri' rupee. But this rupee has been found to be counterfeit and bears discount as compared with

the 'Chandwadi' rupee. This is not right. Therefore, it is ordered that Malakapuri rupees are prohibited and only Chandwadi rupees are declared legal. Collect revenue, therefore, in Chandwadi rupees and stop all the mints in which the other rupees are being struck." There is an entry in the same year of the hire of two hundred bullocks to accompany the Peshwas' camp at Rs. 6 per month per bullock.

It appears from our records that the rural population could live in comfort on the produce of the land it cultivated. The standard of living was plain and the necessities of life were amply supplied. Most of the householders kept she-buffaloes and the supply of milk was adequate. I have before me lists of houses and buffaloes for two villages about 15 miles to the south of Poona, for years, over a hundred years ago, and these were regularly compiled for purposes of taxes levied on the houses and animals. While in one village there is, on an average, a buffalo for each household, in the other, only one-half of the houses have an animal each. From the number of bullocks and ploughs in the villages given in the revenue accounts, we can get an idea of the agricultural equipment of the people. Besides revenue from land, villagers are called upon to pay a number of petty taxes and duties. These "patties" or cesses were no part of the old system of taxation and came to be added with the growth of the requirements of the government. Out of the total amount of taxation at which village Kondhanpur is assessed, about 40 per cent is due as land revenue and about 7 per cent is accounted for by the house and the buffalo taxes. The basis of land assessment had been fixed generations ago; and government sought to increase its taxation income by putting on the small taxes. For a time, the British government kept up the old system and evolved out of it a system of its own after a measurement and survey of land specially carried out.

The general impression left on one's mind by studying such records as we have, depicting the economic life of the mass of the

people, is that according to the standard, peculiar to those people and times, they were well off. Since the rural population lived on agriculture, bad seasons did affect them adversely, and we find the people asking for reduction or remission of taxation; and the system being elastic, the concessions were granted, almost as a matter of course. The village records show also the kinds of crops grown and the condition of these crops during the agricultural season. In view of the persistent complaint of the cultivating classes against the rigidity of revenue collection, the British Government framed definite rules, at a late stage, to govern the suspensions and the remission of the dues. In the Jamabandi statement for the year 1832, for the village Kondhanpur, it is stated that the Revenue Commissioner was approached with a representation that crops having suffered owing to unfavourable rains, the demand for revenue might be reduced. The request was granted, with certain reservations. It is needless to say that Sowkars, big and small, and moneylenders were there and the rate of interest was high.

We cannot fairly and properly apply modern standards to the conditions of India a hundred years ago: the comparison will prove misleading and fruitless. The organisation of the social economy was radically different in those days from what it is now. It was a predominantly agricultural economy, in which a very large measure of self-sufficiency and internal co-ordination between town and country, prevailed. The population was comparatively limited in view of the land that was available for growing food and raw materials. The clothing and the other necessities of life were supplied by craftsmen who worked up materials locally and easily available. The capital required, in small quantities and simple forms, was not difficult to obtain. The bigger landowners were adequately furnished with farm equipment. The wealth that passed out of the rural areas into towns and cities, returned to the people through various channels. The army was recruited from the rural population itself and the military leaders were similarly supplied. The landed aristocracy lived in great style and jewellery

and articles of luxury were confined to a favoured few. But the necessities of life and what were regarded then as comforts, were undoubtedly within the reach of the middle class. The number of those having large and economic holdings, tended gradually to diminish and the steady growth of population appears to have begun to tell upon the standard of living of the people. More than twenty years before the establishment of British rule in Maharashtra, the country was, as we have already stated, in a sad plight owing to wars and misrule, and it is difficult to draw positive conclusions from the information we are able to get. We have, therefore, to be content with making the best use of the material that is available and form from it such estimates as appear to be warranted.

ECONOMIC CONDITIONS IN SOUTH INDIA AT THE ADVENT OF BRITISH RULE

BY

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From the evidences available it seems to be clear that between 1650—1800 conditions in South India went from bad to worse. At the advent of British rule in South India the absence of a stable government and the continuous civil wars between petty chiefs plunged the country into anarchy and bloodshed. A healthy economic life in such a state of affairs was manifestly impossible.

Nevertheless it would be well to remember that these conditions were by no means normal to the life of South India and were brought about by an extraordinary combination of political circumstances. The economic prosperity of the country in the 14th and 15th centuries is beyond dispute. The famous Vijayanagar Empire founded in 1336 on the ruins of the Hoysala Ballalas and other sovereignties rose to considerable power and held the Muhammadans in check for two centuries. During this period, (1336—1565) there were two important powers in South India, namely, the Musalmans to the north of the Krishna, and Vijayanagar in the south. At the close of the 15th century the Vijayanagar sovereigns became even more powerful by the fall of the Bahmani Kingdom and the power of Vijayanagar was recognised throughout the Peninsula. The might of this dynasty was extended still further by Krishnadevaraya in the beginning of the 16th century but unfortunately the Vijayanagar Kingdom fell in 1565 before the combined onslaught of the Muhammadan sovereigns of the Deccan. A number of small chieftains and petty poligars seized this opportunity to assert their independence

and for two and a half centuries South India was torn by dissensions and steeped in bloodshed by these petty and ignorant tyrants.

In this welter of confusion and disorder two powers engage our attention—the Naiks of Madura and the Mahrattas of Tanjore. For about two and a half centuries after the fall of the Vijayanagar Kingdom up to the very advent of British Rule in South India the Naiks continued to hold sway at Madura. They saved the mass of the people from the worst brutalities and oppression of the poligars and expended their large surpluses on capital non-recurring items like public works and irrigation thus helping to promote the economic prosperity of the people.¹ The Mahrattas established themselves at Tanjore in 1674 and continued till they were overthrown by the British.

Opinion is unanimous that in the 15th and 16th centuries India was highly prosperous. Numerous evidences there are to prove that the capital of Vijayanagar was incomparable for wealth and magnificence and that the trade of the empire was sought after and coveted by the leading nations of the world. Ambassadors and travellers to the court of Vijayanagar have left interesting accounts of the prosperity of the empire. Authoritative accounts of other parts of India during the same period also go to prove that this is not a tale of isolated splendour. Mahaum, a Chinese traveller who came to Bengal in 1405, the Venetian, Conti, who was in Vijayanagar in 1420, Abdur Razzak, the Persian envoy, 1443, Nikitin, a Russian Armenian (1470—74), Vasco-da-Gama and Ludovico-di-Varthema (1502), Durate Barbosa (1500—1517), Paes (1522), Nunnez (1555) and others have left records of their travels which make clear the high degree of economic prosperity in the country. All these writers point out that the country was filled with a contented and prosperous population who were engaged in agriculture, trade and commerce. Peace and good government gave economic security, and low prices helped to provide for the

¹ See "Nayaks of Madura" by R. Sathyanatha Aiyar, Oxford University Press, 1924.

generality of the people cheap and ample food, good housing and a fairly high standard of dress. Indeed, the general economic condition was so good that even the common people were not without a few luxuries. But conditions rapidly deteriorated during the two centuries that followed.²

In 1763, the British obtained virtual power in South India when they made their creature, Mahomed Ali, the Nawab of the Carnatic. This did not bring peace or prosperity to the people. The Nawab was weak and extravagant and he did not scruple to pledge his revenues to the servants of the East India Company in return for heavy loans which he took to meet the exactions of his masters. By this means a capricious and spasmodic eastern tyranny was westernized and mechanized into a terrible engine of oppression which wrought untold misery upon the people. The result of this state of affairs is made clear by the evidence of George Smith before the Select Committee of the House of Commons appointed in 1782 to enquire into the administration of justice in India. He says that when he came out to Madras in 1767, Madras was one of the first marts in India with a very flourishing trade. The Carnatic was populous and well-cultivated and the people consumed many articles of trade and merchandise. But when he left the country in 1779 commerce was exceedingly circumscribed, there was little or no trade in Madras, cultivation had greatly fallen and the population had declined.³

At the time that the East India Company acquired large tracts in South India the villages formed the basis of economic life in the country. Each village was a united and self-sufficient economic unit which outlived the fall of kings and the crash of empires. But this golden state of things was ended under British

² See *The Economic Condition of India during the Sixteenth Century*, by H. L. Chabiani.

³ See Page 100, "*Economic History of India*" by Romesh Dutt. See *Fifth Report from the Select Committee on the Affairs of the East India Company*, p. 85.

rule by the anxiety to enhance land-revenue and by the centralization of judicial power. The new land-revenue policy resulted in great hardship for the people as may be learned from the reports of the various collectors of districts to the Government. Thus the immediate result of the advent of British rule in South India was to worsen the already bad economic situation.⁴

The system of land-revenue that prevailed in the country about this time deserves closer study.⁵ Turning first to the Northern Circars which were acquired from the Nizam by the British in 1776 we find that these territories consisted of Zemindari lands and Havelly lands. The Zemindars who held most of the lands were divided into three classes—the Velmas of Telinga origin, the Rachewars of the race of ancient sovereigns of Orissa and the Wooriars who were petty chieftains belonging to military tribes. Their military force consisted of common peons who were paid in money, Mocassa peons who were given land though they were expected to pay quit rent, and the munuoverty peons who were tenants of a higher order. The Zemindars collected the revenues from their tenants and paid a lump sum to the government. The cultivators were entitled to only one-half of the paddy produce and in dry lands watered by artificial means the cultivator got two-thirds. Though this was the general rule exceptions were made in certain cases. Generally, before the harvest the standing crops were inspected by persons unconnected with the village with the help of previous records, in the presence of the people as well as the village officers. Thus the quantity of the crop was ascertained and contributions to government which were paid in money or in kind fixed. In plantations only one-fourth to one-eighth of the annual crop was demanded, additional expenses, distance of the

⁴ See author's paper on Rural Economic Conditions in South India, 1800—1890.

⁵ (a) See North Arcot Manual, by Arthur F. Cox, 1880, pp. 86—137.

(b) Manual of the Coimbatore District, by F. A. Nicholson, pp. 92—126.

market and trouble taken to get the produce being considered in the assessment. Though this was the general rule the Muhammadan conquest and exigencies of war involved an increase in the assessment and the ryot's share was reduced to $1/6$, sometimes $1/5$. Even this high rate was often altered and the Zemindar or his agent increased his exactions arbitrarily and oppressed and ill-treated the people in various ways and drove them to desperation and heavy debts. In addition to this the cultivator had also to pay other exactions called sayers⁶ and moterpha.⁷ The Havellys of the Northern Circars consisted of household lands of the government lying in the vicinity of capital towns. These lands supplied the garrison and the civil and military establishments. When the Company took over these lands they rented them to Dubashes who paid the Company a round sum.

In the Carnatic the Company acquired from the Nabob of Arcot certain lands which were known as Jaghirs. These lands were managed by the Nabob for the Company and were not exempt from the usual exactions of the Nabob. However, in 1780 the Company took over the direct managements of these lands. Though this resulted in a loss of revenue to the Company, it did not in any way improve the position of the cultivator. In 1790 two collectors were appointed to administer the Jaghirs. The war of 1780 and the unsettlement which resulted gave scope for a class of middle-men called Dubashes to rise up; and these only repeated the worse excesses of the Nabob. The misery of the ryots could be better imagined than described. To remedy this state of things Mr. Lionel Place who was appointed in 1793 for the first time made reliable records for the collection of revenue and put an end to the power of the Dubashes and their underlings.

The cultivators in these Jaghirs were of two types—the Merassadars and Pyacarries or Paracoodies. The Merassadars paid

⁶ Sayer, a duty on grain, cattle, salt, etc., passing through the country.

⁷ Moterpha: tax on houses, implements of agriculture, loans, etc.

about half the produce and for dry crops they paid a fixed sum of money. Apart from these, the Merassadars held certain lands which were altogether exempt from government tax. When Merassadars had lands too extensive for personal cultivation they allowed them to be cultivated by strangers who were called Pyacarries. Those Pyacarries who had a life interest in the lands they cultivated got only 45 per cent of the produce while others got 50 per cent. Sometimes the government also entrusted certain lands to Pyacarries.

The land-owners in Canara and Malabar seemed to have enjoyed greater freedom and security. The lands were largely in the hands of individuals whose title to them was clearly proved by deeds of gifts, transfer or sale.

In Canara the landlords or proprietors were called Nair Mulguenies. Their lands were handed down from father to son or from uncle to nephew, according to the law of inheritance. Private property in land was so well recognised that a man did not lose his proprietary interest in the land even though he did not pay the government assessment. Even after a period of absence he could claim back his land on payment of arrears. These lands seem to have been held directly from government, subject to the payment of a stipulated fixed rent. The holders enjoyed full power of transferring, bequeathing and selling. They had under them a large body of sub-tenants known as shud mulguenies who enjoyed the same privileges as the tenant-in-chief. The assessment on land was about a fourth of the gross produce under the Bijungger government, and about a tenth under the Bednore government. This system of things continued for two and a half centuries till 1763 when the land was conquered by Hyder Ali. The continual increase in the assessment under the Muhammadan rulers made for a considerable decrease in the population till at last there were few landholders in this area at the advent of British rule.

In Malabar also, private property known as Janmum existed

from the most ancient times. There were different kinds of tenures known as *Kanum Patum* and *Kay Kanum Patum*. In *Kanum Patum* tenure the tenant not only paid his annual rents but also paid a sum of money in advance as security for payment of rents. The landholder let his land for a fixed period of 12 years to the tenants free of any annual charges in the case of *Kay Kanum Patum*. The tenants in return cleared the plot of land and planted it with trees. The owner had the option of claiming back the land at the expiry of the period. During the days of the Hindu kings the lands in Malabar were exempted from all revenue charges but the conquest by Hyder Ali brought with it a tyrannical and oppressive assessment, which continued till the advent of the British in 1800.⁸

In Tanjore also "revenues were realized, partly by a division of the crop, partly by a grain rent or monied commutation of the produce, and partly by a fixed rent in specie; each rent seldom combined more than the interest of one village, and did not descend to an engagement with each individual." In later years, *Puttuckdars*, a new class of persons, were introduced who acted as middlemen between government and the head ryots. The conditions in 1683 are described in a letter of Jean de Britto to Paul Oliva, wherein he says, "it will be difficult for you to conceive of such oppression, and I must add, however, that, in the kingdom of Gingi, tyranny is even more frightful and revolting. Further this is all I shall say about it, for expression fails me to tell you how horrible it is."⁹

Without going into the full history, it is enough here to point out, that the *Puttuckdars*, who were oppressing the inhabitants were removed when this province was transferred to the British

⁸ See Memorandum on the Progress of the Madras Presidency by S. Srinivasa Raghava Iyengar, C.I.E., 1893, xxix—xxxiii.

⁹ See *Travels of the Jesuits, into the various parts of the world*, translated by Lockman, 1762. Two volumes.

government, and in 1804 the principle of Ryot-war rents was extended to this province.

Apart from these a large portion of the lands in South India was in the lands of poligars when it came under British control. The poligars were military chieftains with varying degrees of power who had their lands in jungle or frontier districts, acting often as leaders of freebooters. Some of them had received lands as *enadams* from Hindu Rajas while others were revolted revenue officers who had taken advantage of a period of unsettlement. The frequent feuds and struggles between them and the ruling powers made for a grave deterioration in the economic condition of the country. When the British took over the control of the Carnatic there was a large number of poligars in that area. They acted as district and village watchers and exacted various dues known as *tallum cavel* and *deshia cavel*.

The condition of the tenants was however much better under the Nayaks of Madura. Their revenue administration was so effective that the revenue was collected with ease and promptitude. The Nayaks had very little private property, almost all lands being held by tributary lords and petty princes who exercised all police and judicial power in their dominions. The lands were let by nobles to farmers and under these the vast mass of the workers who were no better than slaves laboured on the lands. According to a Jesuit writer the assessment was about one-half of the produce.¹⁰ Those contributions raised by the lords were divided into three portions, one of which was given to the Nayak, the other devoted to military expenses while the third was appropriated for their own use.

An exhaustive description of the conditions of the time being out of the question in a paper of this length, only a brief survey has been attempted. It is clear by this time that constant wars and changes of government resulting in unsettlement

¹⁰ Letter of Antonio Vico to Laerzio, Madura, 30th August, 1611.

and anarchy, differences in systems of land revenue, alien conquest, and continuous increase of revenue left little margin to the cultivator to eke out his existence after meeting the exactions of his oppressive masters. Two and a half centuries of oppression and misrule had wrecked the economic structure of the country and left the cultivator a mere shadow of his former self.

The conditions of labour during this period were nothing short of slavery. Slavery in one form or other existed almost in every district. In many places slavery arose out of initial voluntary contract for a single year. Then the labourers took from the master houses or advances of money which often tied them to the land and made it impossible for them to seek a new master. For example, at Bhawani in the Coimbatore District, the servants called Padiyals were hired by the farmers annually; they sometimes bound themselves to serve for a number of years, their wages, being about 5s. to 6s. 8d. a year, and they received in addition 1 1/100 bushel of grain. Their houses were little more than thatched huts, which were small and ill-ventilated.¹¹

From the abstract of the proceedings of the Board of Revenue, dated 25th November, 1819, on the subject of agricultural slavery, we find that there were 17,000 slaves in South Arcot, 10,600 in Trichinopoly, 82,000 in Canara, and about 100,000 in Malabar.

In South Arcot the slaves were provided with food and clothing and were protected in sickness and old age. Slaves in Chingleput were given grain allowance and their position was considerably changed for the better afterwards owing to the nearness of Madras city. At Trichinopoly the slaves were usually sold with land and sometimes mortgaged. These slaves were not treated harshly and received certain gratuities. Similarly in Canara the slaves were the property of the master who sold them with the land or separately or let them out on hire but they too were not harshly treated. The largest number of slaves was found in Malabar and they were

¹¹ See *Manual of the Coimbatore District*, by F. A. Nicholson, 1887, p. 270.

frequently sold or mortgaged or hired. However the slaves in this district were kept in comfort by the masters and were even better off than the lower classes of free inhabitants. The Cherumas who were agricultural labourers in Malabar were recognised as the property of the lords and those slaves were sold for 80 to 90 rupees (present money).

So we can come to the conclusion that serfdom characterised the greater part of the labouring classes of the land except in the Telugu Districts before the advent of British rule and that it was only in 1836 that the slaves were emancipated in government lands. In 1842, by an order from the Court of Directors, attempts were made for the entire abolition of slavery.¹²

A flood of light is thrown on the economic conditions in South India about 1800 by the diary of the travels of Francis Buchanan¹³ through the areas which the East India Company had newly acquired. He gives an exhaustive account of the agriculture, arts, commerce, religion and manners and customs of the people. Nothing seems to be too trivial for this careful investigator who notes the climate, the winds and seasons, the people, the crops, the food, the cattle, the fauna and flora as well as the different articles and methods of manufacture. A large part of his journey lay through a country which had been the theatre of continuous wars where stable economic life had been unknown for years. Yet, everywhere, vestiges were found of manufactures and industries still struggling on; the sacred agriculturists, and frightened artisans, still continuing to eke out a miserable existence from those occupations which had once brought them power and opulence.

Since the condition of the labourer and the agriculturist has already been described we shall briefly survey the few industries

¹² See *Manual of the Administration of the Madras Presidency*, Vol. I, 1885, p. 112.

¹³ Francis Buchanan, M.D., *A Journey from Madras through the Countries of Mysore, Canara and Malabar*, 2 Vols., 1870, Higginbotham & Co.

that existed. Buchanan found that at Chennaputnam small bottles and ornamental rings for the women folk were made; also steel wire for strings of musical instruments. Another industry which had reached a high degree of perfection was the manufacture of white sugar. It is unfortunate that the secret of this industry was kept a jealously guarded secret and that only small quantities were produced in order to supply the court. Iron mines and indigenous smelting furnaces were also found at Maghery. Bangalore boasted of dyed and woven cotton cloths, muslins and puggarees. Indeed, manufacture of cotton textiles flourished throughout South India as a cottage industry. Coloured cotton cloth with silk borders was also to be found in this city. Muslins were a special feature of Bangalore and there were different varieties of them namely—*dutry* which was a striped and chequered muslin frequently with flowers of cotton or gold thread woven into them, *sodashilla* and *astocumbi*, striped with silver and ornamented with flower designs. The workers employed in these manufactures were better off than the agricultural workers. The weavers were paid on the piece rate system and earned about 8d. a day. They seldom took to agriculture as a part-time occupation as their brethren elsewhere did. Gunny bags also formed an article of manufacture in and around this city. Tanning and the manufacture of oils such as Sesamum, Castor, Coconut, Hoingay were also carried on. Smelting of iron was carried on in many parts of Mysore, Coimbatore and Malabar. Culinary salt was scraped from the surface of the land in Coimbatore and various other places while saltpetre had also been manufactured for Tippu's use. In addition to these the coconut and arecanut were largely cultivated in Malabar. Pepper formed the principal article of export from Travancore, and in 1757 the Rajah of Travancore promised to supply the British with large quantities of pepper valued at about 13 lakhs of rupees. These and various other minor industries were carried on in isolated places throughout the country. The accounts of Francis Buchanan make clear the fact

that to a large extent the needs of the inhabitants were met by indigenous industries and that the complete dependence on imported goods so characteristic of our times was unknown at the period.

Nevertheless, it is abundantly clear from the records of various English writers that the condition of the people in South India in the 18th century was miserable in the extreme. The settled and peaceful rule of earlier centuries was succeeded by a period of chaos and unsettlement and the country was devastated by wars, famines and plunderers. Life and property were at the mercy of capricious poligars or stray parties of wandering horsemen; communications were defective and the roads were infested by plunderers. Governments themselves being amorphous and fluctuating, each tried to squeeze as much from the cultivators as possible. The tax consequently on land was oppressive in its incidence and to it were added all manner of capricious and illegal exactions. Fleeced in turn by the Mogals and the Mahrattas many of the cultivators deserted the plough and became robbers. The struggle between the English and French did not mend matters. and an observer in 1766 remarks that the internal management was entirely disorganised, even the memory of civil authority being totally lost. The wars with Hyder resulted in the complete depopulation of the whole of Chingleput. The wealthy deltaic area of Tanjore was almost ruined by the rapacity of the Nabob of Arcot. When Tanjore, Trichinopoly and Canara fell into the hands of the Mysore rulers, the policy of spoliation left these areas denuded of their wealth and their population. The country was infested with gangs of marauders and even the smallest village was fortified in Canara. Choukies and customs houses choked all internal trade: every poligar demanded toll and it is estimated that in the Salem District there was a toll for every eight miles. The people were crushed by taxes of every kind, no less than 35 being mentioned in Coimbatore. Government revenue was often realised by torture, and Courts of Justice were conspicuous by their

absence. Small wonder then that the agriculturists were steeped in poverty. To add to all these difficulties there was no stable currency in the land, in Salem and Ceded Districts alone forty different types of coins each different from the other being current. Matters were made even worse when Tippu Sultan frequently changed the value of his coins.

History has repeatedly shown that there is a tide in the affairs of nations as of men. At the advent of British rule this tide was apparently at its lowest ebb in South India. Centuries of prosperous rule had been succeeded by a period of utter anarchy and confusion. During this period of upheaval gradual adjustment was rendered difficult by the ignorance and lack of sympathy of alien conquerors. The policy of the East India Company and the mismanagement by its servants did not serve to mitigate the evil. Some of them believed that "Money was the chief consideration and it could only be acquired by corrupt means."¹⁴ Thanks to Thomas Munroe this policy was gradually overthrown and the people of South India were rescued from their miserable condition.

¹⁴ The Cambridge History of India, Vol. V, British India, edited by H. H. Dodwell, p. 467.

RECENT DEVELOPMENTS OF MONETARY THEORY

BY

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Monetary theory is many-sided and extremely complicated. Money has had to be brought into relation with a variety of economic phenomena and their ramifications, and its influence on them has been determined by thinkers in a variety of ways. The very nature and the functions of money have, for a long time, been a matter of prolonged controversy, whose echoes may be heard even to-day. Disputes over currency principle and banking principle, metalism and nominalism, the choice of a proper monetary standard, the merits of the gold standard, the mutual relation of money and credit, the relation to one another of money, prices, foreign trade and foreign exchanges, appeared, however, to have been almost settled, undoubtedly with differences of view here and there, about the early part of the present century, and a tacit understanding, if not an agreement, seems to have been established among economists in respect of the fundamental monetary theory. The economic unsettlement of the war and the post-war periods, however, rudely disturbed the placidity of this understanding, and controversies have been fanned into flame anew over some of the most vital aspects of monetary theory. The breakdown of the international monetary standard, the collapse of international exchanges, the orgies of inflation in which states and banks indulged and the disastrous slump in prices which succeeded the rehabilitation of the shattered monetary systems of the world, have evoked interesting discussions relating to different aspects of the theory

of money. The persistence of distressing economic depression has led to an intensive study of monetary phenomena and monetary theories; and the numerous plans which well-meaning people have been throwing at the heads of banks and governments, with a view to restore economic prosperity to nations and to the world as a whole, have lent an added interest to the discussion of monetary problems. The study of economic cycles and industrial fluctuations and along with it, of the influence of money and credit in these phenomena, had made considerable progress before the war. It has been stimulated during recent years, and some of the leading economists of the world have participated in these discussions, and have made valuable contributions to the development of monetary theory.

Can the gold standard be restored to its pre-war status and will it work satisfactorily? If it will, in what circumstances will it do so? Cannot some other and a more suitable and a more convenient standard be chosen? Is stability of prices desirable and if it is, how may it be attained? Can prices be regulated through a control of monetary circulation and what is the relation of price levels, volume of money and of credit and foreign exchanges? These are some of the most important and, one may say, baffling questions which have been claiming the attention of the public and of economists recently; and their discussion very naturally touches, at various points, the fundamental monetary theory itself. One of the most interesting and, in a way, the basic problems in respect of monetary theory, undoubtedly relates to the determination of the value or the purchasing power of money and it involves the development and a proper understanding of the quantity of money theory. The questions that arise in this connection are: Has money itself any value? If it has, how is it measured? What are the conditions which cause changes in that value from time to time? Monetary theories have been conveniently divided into two classes, those which deal with the problems of money from the static and the qualitative standpoint and those which have to do with the quantitative and the dynamic point of

view. In spite of the differences of opinion which still prevail, to a certain extent in respect of the nature and the functions of money, there is a "general agreement that the value of money is measured by its *de facto* command over goods and services and that changes in such exchange value can be stated most easily in the form of index numbers, which, as they express alterations in the level of prices, reveal the reciprocal of changes in the purchasing power of money." The quantity theory of money was employed to explain this phenomenon, but since, in its early formulation, it failed to give satisfaction, it has been presented in improved forms. Prof. Gregory, in his article on money in the *Encyclopædia of the Social Sciences*, from which the sentence quoted above is taken, sums up the position thus:—"It is now possible to classify the various theories concerning the causes that determine the changes in the purchasing power of money. They fall into three main groups; cost theories, which may be subdivided into cost of production and labour cost theories; quantity theories, which may be further divided into those derived from supply and demand theories of value and those attributing to money a position of a special economic category with unit elasticity of demand; and the marginalist theories. The last group comprises the cash balance or holding theories as represented by von Mises, Marshall, Cannan and Pigou; income theories with eclectic elements as represented by Keynes; and, finally, theories based upon eclectic views of price as held by Cassel."

The quantity theory has undergone refinement in various ways, and the 'equation of exchange' has been consequently constructed so as to bring out the precise influence of the various factors involved in it. That "the quantity theory is not a theory but an axiom" sums up the criticism levelled against it by many, and attempts had to be made to demonstrate how changes in the volume of money brought about alterations in the price level. The difficulty lay in determining the quantity of money itself, and the factor of velocity had to be introduced as a kind of a god in the

machine to estimate accurately the volume on both sides of the equation. The cash balance and the income theories were evolved to overcome this difficulty, and equations were appropriately constructed to bring out the significance of the various elements. Reference has been made above to the many plans of economic revival which have been put forward; and several of the monetary theories have been manifestly coloured by the main ideas underlying such projects. If high prices were admittedly caused during and on the close of the war, very largely by inflation, can it not be argued that the prevailing slump in prices is due to inadequate quantities of money being available for purposes of exchange and may it not be remedied by reflation if not by inflation? Are not low prices themselves, asks the critic, the cause of a smaller volume of money in circulation instead of being the effect? Melchior Palyi, for instance, in dealing, eight years ago, with the "unsolved problems in monetary theory" strongly criticised Keynes and Hawtrey for indulging in abstractions and ignoring the influence of other factors than that of the volume of means of payment, in explaining changes in the purchasing power of money. Other continental thinkers have taken up a similar line of attack on the quantity theory. Bertrand Nogaro, for example, in his *"La Monnaie et les Phenomenes Monetaires Contemporains,"* sums up his comment thus:—"Thus taken as a whole, the quantity theory rests on observation of experience but that observation has been made in a closed market, at a given moment, with a stock of money integrally and immediately consecrated to a stock of merchandise, fixed and limited and in a sort of a static condition, so that the supply may not be proportional to the demand; but the classical doctrine extends to a market where goods are flowing and are perpetually renewed, a market covering the whole nation or the entire world." He concludes: "We affirm that instead of facilitating the solution of problems, the quantity theory has, for a long time, discarded precise and rational interpretations in favour of superficial and illusory interpretations."

Whatever the justification for the hostile criticism against the abstractions, the simple assumptions and crude attempts at application to practical problems, involved in the quantity theory, may be, it will have to be admitted that the substitution of income for volume of circulating medium and the introduction of the principle of marginal utility for the understanding of monetary phenomena, have led to noteworthy improvement in the approach to the study of the whole problem. Knapp's concept of nominalism with reference to money has now been generally accepted and is the normal basis of monetary discussions. Similarly, the idea that money is neither an ordinary commodity nor an instrumental or intermediate good but is a category by itself, owing to its peculiar nature and function of a medium of exchange, is favoured on all hands. The conclusion follows that elasticity of demand for it being unity, the value or purchasing power of money depends upon its quantity. It is indeed true that some of the assumptions underlying these propositions may not be true of certain communities and certain conditions, e.g., in India. Thus metallic money may continue to enjoy great importance and the credit machinery may be undeveloped and even the index numbers as constructed may not correctly and faithfully reflect changes in the value of money and may, therefore, not be of much practical utility. It will have, however, to be admitted that the quantity theory as recently formulated, is no longer open to the objection that it is mechanistic and does not tell us how actually the price level is influenced by changes in the volume of money. Prof. Gregory shows how the new approach to an understanding of the problem is more helpful, in the following words:—"It is the great merit both of the cash balance theories and of the income theories that they bring into the foreground the causal elements involved: a change in the desire to hold money may bring about a change in the price level even without any change in the supply of means of payment; alternatively, an increase in the stream of money income will have a greater or lesser effect upon the level of prices according

to whether the increased money resources placed at the disposal of consumers result in additional expenditure, i.e., increased "consumers' outlay", or whether they are added to the "unspent margin", i.e., are neutralised because of the desire of the public to hold larger balances."

It is interesting to realise how money plays a vital part in the distribution as well as exchange of wealth. Goods and services employed in production are paid for in money, and incomes of people are thus received by them in the shape of money. These incomes, however, satisfy the wants of their recipients only by being turned into goods and services; and therefore, the purchasing power of money is of the utmost importance to them. "The unit of exchange (and payment for goods and services) that is, the money unit, is thus the unit of incomes in a double sense; first, as the unit of calculating wealth in terms of money and second, the unit of purchasing power". (Prof. Dr. Wolfgang Heller: "Theoretische Volkswirtschaftslehre.") The value of money is characterised, therefore, as "the relation between claims to goods based on services rendered by individuals and the possibilities for the satisfaction of wants afforded by the supply of goods secured through the process of wealth distribution." That the price level and the value of money can change through change on the goods side of the equation, was easy to understand; but how prices can change through a change on the side of money, which is only an instrument of exchange, was difficult to grasp. But it should be noted that money incorporates claims to goods and influences distribution; and a change in its quantity disturbs the equilibrium between incomes and goods and therefore the value of money. It does not work directly on market prices but through the distribution of income. It follows from this that the change in prices, brought about by changes in the volume of money, cannot be linear, that is to say, all prices cannot rise or fall in the same measure. It is through the disturbance in the quantity of income that the changes can proceed and they will spread in the community by

stages. It was the idea of a change in the level of prices being proportionate to the change in the quantity of money that brought the old quantity theory of money into disrepute. Prof. Heller's explanation of the process is peculiarly illuminating.

Fluctuations in prices, particularly in what are known as economic or trade cycles, must depend on the money income of the community and the manner in which it chooses to utilise it. Prof. Gregory, therefore, says:—"It is, however, necessary to supply in detail the reasons why it is desirable to hold larger or smaller balances at one time or another, and to explain how an increase in the stream of money income can take place. But given a fixed supply of means of payment, increased outlay simply means a diminished average balance, while an increased average balance involves diminution of outlay. An increase in the volume of means of payment is due either to increased borrowing by the business community or increased (uncovered) expenditure by governments. It is clear that it is easy to pass from one theory to the other; the general idea is the same, although the emphasis is different." In view of this development of thought on the subject, Prof. Keynes' *Treatise on Money* must be regarded as the most recent contribution of outstanding merit to the study of monetary theory. It is impossible to give here even a rough idea of what he has attempted to propound. But it may be said in general terms that he attributes changes in the value of money to a divergence or lack of correspondence between the money savings of the community and the volume of new real investment, that is, the net addition during a given period of time to the capital wealth of the community. He constructs his own equations of exchange to demonstrate the truth of the thesis he seeks to expound. The special meanings in which he uses some of his terms such as saving and investment and also the method of treatment he has adopted in the new work, have aroused a good deal of criticism. To many the book is confusing and full of ambiguities and others join issue with him in regard to his arguments and conclusions. Even friendly critics

find the book difficult to follow and appreciate; and Prof. Keynes has already had to cross swords with doughty champions on the other side, like Dr. Hayek (see issues of the *Economica*, specially No. 34, for November, 1931).

Prof. Keynes himself says that his new theory represents a radical departure from the lines of the old quantity of money and velocity of circulation schools and is not quite unconscious of the ambiguities and apparent inconsistencies which have crept into his work as also the difficulty readers would experience in following him. It appears as if it will be some time before his thesis is clearly and properly appreciated and the value of his contribution to the theory of money is correctly appraised. It happens that in repelling Dr. Hayek's attack on his *Treatise*, in the pages of "*Economica*," he has very briefly stated precisely where he differs from his opponent and what his own analysis exactly amounts to. It will be useful to summarise briefly what he has to say: According to Dr. Hayek, voluntary saving always finds its way into investment. This is so because increase of saving means a net increase of purchasing power directed to the buying of 'investment goods' or 'intermediate products'. Voluntary saving and investment are not, however, always equal. The banking system may increase the supply of money, and additional funds will thus be available for investment, with the result that the latter will exceed saving and contrarywise if the banking system decreases the supply of money. Thus a disequilibrium between saving and investment is necessarily the result of action on the part of the banking system. Dr. Hayek's conclusion is that the necessary condition of avoiding credit cycles is for the banking system to maintain the effective quantity of money absolutely unaltered. On the other hand, in the view of Prof. Keynes, saving and investment, as he defines them, can get out of gear without any change on the part of the banking system from neutrality, merely as the result of the public changing their rate of saving or the entrepreneurs changing their rate of investment, there being no auto-

matic mechanism in the economic system to keep the two rates equal, provided that the effective quantity of money is unchanged. A changing price level due to a change in the relation between saving and investment, costs of production being unchanged, merely redistributes purchasing power between those who are buying at the changed price level and those who are selling at it, as compared with what would have happened if there had not been a change in the relation between saving and investment. The above summary is given not to elucidate the particular development of the monetary theory which Prof. Keynes has attempted, but simply to illustrate the trend of his recent thought on the subject.

Most of the thinkers who have, in recent years, devoted special attention to problems relating to monetary theory, appear to have done so in connection with their study of the phenomena of industrial fluctuations. In so far as the theories of industrial fluctuations have reference to money and credit, they tell us how in the time of the boom, more money is invested than is saved and this supplementary money capital comes out of credit extended by banks. The resulting relative high prices compel certain classes to reduce their direct consumption and lead to their "forced savings". The increased supply of credit renders possible the carrying out of new combinations of the factors of production and new goods are manufactured at the expense of consumption. (Ropke: "Krise and Konjunktur".) The role played by money, credit, interest rates, investment and savings in the up and down movements of the waves of industrial conditions, has been ascertained by close students of booms and depression, and their conclusions are, broadly speaking, found to fit in with those derived from the discussion of monetary theory we have had above. The suggestions which have been made by various writers very naturally have direct reference to their own analysis of the prevailing depression and to measures they regard as practicable or desirable in the circumstances. Non-monetary and even non-economic causes are very largely responsible for the persistence of the present

depression, and the ordinary monetary remedies to overcome it, are found to be insufficient and inefficacious. Mr. Beaumont Pease of the Lloyd's Bank, pointed out at its last general meeting, how the deposit liabilities of that institution had increased in a single year by as much as £48 millions to the record figure of £382 millions and how the total deposits of all the clearing banks in England had increased by £232 millions during the same period. There is a pathetic touch about his observations regarding this increase in public savings which could not go into investments. He remarked:—"Something must occur to induce the owners of this increased purchasing power to put it into use. Some spark must reignite the torch of hope, some outstanding event or accumulation of events must strike man's imagination and persuade him that the darkness is past and the dawn at hand . . . that if he does not buy to-day he will have to pay more to-morrow for what he requires."

The position in India is similar to that depicted above. But from other points of view, it is much worse. Our commodity and money markets are not properly organised and are lacking in the sensitiveness which normally influences investments, savings and rates of interest. The essential information and statistics relating to these matters, are wanting; and though monetary and banking problems have been hotly discussed in the country for years and a central reserve bank will be soon established, it is now that a beginning is being made to do something systematic in this respect. In the circumstances, discussion of monetary theory and the policy to be based on its conclusions, will appear in India like the useless spinning of delicate yarns, when even the suggestions of men like Prof. Keynes for western communities, are characterised as Utopian. It is, of course, true that economists can only suggest and leave it to others to implement the suggestions. If the present slump is attributed to saving exceeding investment, aggravated by a propensity to hoard, who is to remedy the defect? According to Prof. Keynes, it is the duty of the banking system

to achieve equivalence by making their market rate coincide with the 'natural' rate, thus preventing fluctuations in the price level. For this purpose he would have international control and a supernational authority to regulate monetary affairs. This is a notable sample of the ideas and suggestions propounded by various thinkers who have been actively working on the problems of industrial cycles and money and credit. An excellent summary of modern monetary theories will be found in the issues of the *Manchester Guardian Commercial*, for the early months of the last year. However they may differ from one another in the process of analysis and the policies they point to, it is noteworthy that there is a large measure of agreement among thinkers in respect of the fundamentals of monetary theory. An examination of the monetary phenomena which have presented themselves in varied forms in the post-war period, is calculated to demonstrate the error of the old quantity theorists of concentrating on the volume of money as the sole cause of price changes and their failure to bring it into proper relation to other and equally important factors. The caution conveyed in the following observations with regard to the use of the exchange equation, would, however, appear not to be superfluous even at the present day:—"Change in the quantity of money and its velocity of circulation, cannot be regarded as the "cause" of the changes in the value of money, since both changes go hand in hand and owe their origin to other circumstances, particularly the production of and demand for gold, bank policies and government expenditure, which have little to do with the quantity of money.....It would be a fruitless effort to attribute changes in the commodity values of money to one "ultimate" cause. (Hero Moeller: "Die Lehre vom Gelde.")

THE GOLD STANDARD AND ITS FUTURE

BY

V. SIVARAMAN, B.A. (HON.)

The Gold Standard has fallen on evil days since the war. Of the two big countries that still clung to her, France has been left alone and the United States of America has renounced her allegiance. Naturally one is inclined to ask what will be the future of the Gold Standard.

The Gold Standard in the past has been the keystone of an ordered economic system. Till the war it had worked tolerably well, with perhaps no violent changes in the price-level. Of course there were oscillations in the general price-level. But the maximum fall in the whole century was perhaps much less than occurred in the past two years alone. The Gold Standard automatically adjusted the balance of payments between different countries and where necessary the course of trade itself. This 'delicate piece of mechanism' has gone wrong now.

The rules for the working of the Gold Standard have never been precisely stated. The failure of the annual output of gold to keep pace with the demand for the same has compelled almost all the gold countries to discontinue the issue of gold coins and, officially as well as non-officially, to discourage hoarding of gold coins and bars. It has also been accepted that monetary authorities should not take the initiative for withdrawing gold without the consent of those monetary authorities who would be affected by their action. Also in view of the increased requirements of the world no country should withhold an unreasonably large amount by artificial means. How central banks have acted against these rules, thus causing the downfall of the Gold Standard, is too plain to require any explanation.

It would be well to see how the various countries of the world made a return to gold, and thereby understand how the foundation itself was laid on a shaky basis. England made a return to the gold bullion standard and on an over-valued basis. France returned to gold in 1928 on a devalued basis (to encourage the gold flow into her bank vaults), adopting the Gold Currency Standard while certain other countries adopted the Gold Exchange Standard. Thus there was no unanimity in the currency systems of the various countries of the world.

The much criticised maldistribution of gold and the sterilisation of over 70 per cent of the world's monetary gold by America and France were undoubtedly caused by the pursuit of extremely nationalistic policies, whereas, perhaps the most important condition for the smooth working of the Gold Standard is international co-operation. War debts and reparations, commercial and tariff policies of an extremely nationalistic and protective nature, the sudden stoppage of foreign lending by France and the United States of America and some other causes only too easily made gold flow into the bank-vaults of the United States and France, only to be idly deposited there deprived of its reproductive quality. That is to say, the chief function of the Gold Standard, namely the supply function, has been neglected since gold was divorced from credit.

Had the United States of America and France released their surplus gold either by means of lending abroad or by the adoption of a monetary policy which allowed natural economic tendencies to take their course, the evils of the world crisis could have been minimised. The absence of adequate co-operation was responsible for the difficulties. As Sir Arthur Salter says: "The Gold Standard cannot adjust the flow of capital if a higher rate of interest attracts the investor less than the fears of losing what he has lent discourage him. It cannot adjust relative natural price-levels if economic organisation offers stubborn resistance. It cannot correct a balance of trade which is leading to disaster if it is

deliberately impeded by commercial policy. In short a new adjustment of the system is essential, supplementing the old automatic system by deliberate direction." Thus international co-operation is one of the fundamental prerequisites of a revival of the Gold Standard.

Considering the case for any alternative standard, can an international managed paper currency be thought of? Evidently such a system is more likely to be mismanaged than any other system. Moreover, such a degree of co-operation involving the subjection of independent nations to an international authority is impossible to attain. The other suggestion that there might be a division of the world into two groups, namely the sterling bloc under Britain's lead and the gold bloc, each working in co-operation with the other can be entertained only as an interim policy with a view to the ultimate return to gold. Because for the smooth working of the international world economy a common standard is inevitable. The other suggestion is the adoption of international Bimetallism. But international co-operation of a closer nature is required if Bimetallism is to work at all than perhaps in the case of the Gold Standard itself; for in the former case we have to deal with two metals whereas in the latter, we have to deal with one only.

It is true there are obstacles in the way of a return to gold, the removal of which is absolutely essential for the permanent and smooth working of the Gold Standard. All are agreed that there must be the abolition or at least an effective scaling down of Reparations and War-debts, for an adjusted balance of payments is the prime requisite of a reliable currency; an international agreement with regard to commercial and tariff policies; the restoration of a reasonable degree of freedom in the movement of goods and capitals; the attainment and the maintenance of equilibrium in the internal economy of each country, not only as regards public revenue and expenditure but also as regards the cost of production and the organisation of internal money and capital

Markets; a radical reduction in the demand for central bank gold reserves; sincere attempt towards the stabilisation of the value of gold, etc. International action along the lines indicated here is necessary.

Dr. Gregory also suggests that a return to gold is inevitable. But he takes up the highly controversial question of stabilisation, and says "there must be a period of experimentation before *de-facto* stabilisation, let alone *de-jure* stabilisation is attained." He argues that stabilisation need not be on the basis of a higher price-level. But when one considers the difficulties with regard to debtor-creditor relationships, one should be inclined to agree with the Geneva experts that a conscientious and determined international effort to encourage a rise of prices is an essential part of any programme of reconstruction. But this problem may be let alone with the remark that the question of when the return to gold should be made and the exchange parity at which it would be carried out would depend on internal as well as external factors, and these questions might be determined by each country without prejudice to its international working. I am here concerned only with showing that a return to gold is inevitable and not at all impossible as some critics would try to make out, if only the requisite amount of international co-operation is secured, which is the fundamental condition precedent for recovery, whatever be the particular way adopted to attain the end. My contention is that that particular way is realised by a return to gold as early as possible.

The Gold Standard system might feel proud of having achieved the conversion of one of the staunchest decriers of the system to its side. The new Dr. Keynes who formerly characterised gold as a fetish, fit only for a barbarous age has now suggested a modified Gold Standard, in which the use, if possible the value of gold would be regulated by international agreement. Of course the real choice now before us is between a purely managed paper currency and a modified Gold Standard. In the words of the *Economist* in the present day conditions of the world, political as well as psycho-

logical, Dr. Keynes has done well in advocating a modified system of Gold Standard itself.

In his *Means to Prosperity* Dr. Keynes advocates a kind of international reflation by the creation of 5000 millions worth of gold dollar notes. The gold contents of the dollar would represent the value of the notes. The notes would be issued by an international authority set up for the purpose and would be obtainable by the participating countries against an equal value of the other countries up to a maximum quota for each country. Central Banks would accept the notes as the equivalent of gold. They would not however enter into circulation but would be held as a reserve against domestic note issues. The bonds would carry a certain rate of interest alterable by the international authority empowered even to vary the volume of note issue as a whole. The scheme is intended to ultimately raise the gold price level and bring to minimum its fluctuations in the future. Regarding parity Dr. Keynes says, each participating country should adopt a *de facto* parity between its national currency, and not only of gold notes but also of gold.

Mr. Brand in the *Times* criticising Dr. Keynes, says that the real cause of the whole trouble is excess of international lending and borrowing, and hence suggests that restrictions on trade should first be removed. But Mr. Brand would do well to remember that those restrictions themselves might have been adopted to prevent a downward trend of prices in which efforts to reverse the latter tendency should first be made. Moreover if the scheme creates confidence in the member countries the present gold thirst would be considerably relieved. 'Lend and import' policy might perhaps be encouraged. Prices of primary products might perhaps rise. Governments might start public works and thus the internal unemployment misery due to increased imports might be considerably lessened. The debtor countries might use the notes to discharge their obligations.

But two kinds of criticism, which are really great obstacles in

the way of the realisation of such a scheme should be met. The first difficulty is that of the stabilisation of those notes themselves as a result of maldistribution. The other difficulty is as to whether nations would brook the domination over them of an international authority in such an important part of the economy of each country, namely currency. The only answer to these would be that whatever standard might be adopted as an international standard, these difficulties would continue to exist. One cannot have the cake and eat it. Countries must sacrifice something of their national independence for the sake of the world peace. Under any system, international co-operation is indispensable, "for an international money system can never function in a nationalistic world."

Or they might adopt another system of Gold Standard, not having so much of international domination. A system of Gold Bullion Standard with the other requisites necessary for its introduction mentioned elsewhere in this paper, seems to be the only alternative. In this connection, the present monetary policy pursued by America needs to be mentioned. The controlled inflationist policy of President Roosevelt, with the object of raising American prices is perhaps of doubtful value. She has practically gone off Gold and is against any kind of temporary stabilisation. But she is prepared to co-operate with the other countries for a permanent return to Gold and thinks of stabilisation. But the present policy of America, perhaps, is not desirable from the point of view of the world. In the words of Edie: "The outside countries of the world are waiting to see the outcome of the United States of America policy. It is exceedingly doubtful whether England would return to a gold base, which would make the pound sterling the unhappy victim of convulsive movements as those of the Dollar. Unless the dollar can be administered along lines of greater restraint and moderation, it would be unsafe as an anchor for the World Monetary System." But nobody in fact desires any Currency to be absolutely relied upon.

International co-operation is absolutely essential for the revival of any scheme of currency. But one can venture to say that the present political and psychological conditions are more in favour of a modified Gold Standard. The best monetary opinion throughout the world favours a return to Gold. The Financial Subcommittee to the World Economic Conference accepted that 'gold should be re-established as the international measure of exchange values, the time and parity being left for each country to determine; gold need not and should not circulate as money but should be held as a reserve against Central Bank liabilities; that a reduction of reserve ratio in Central Banks is essential and that Central Banks should co-operate through the Bank for International settlements. The Royal Institute of International affairs on 'Monetary Policy and Depression' similarly advocates a return to gold sooner or later, and one of the reasons is that if a return to gold is made with universal Currency devaluation it will release new credit in Central Banks of the debtor countries, which will give a stimulus to rising prices and at the same time provide the means by which restrictions on transfers, moratoria, and excessive tariffs can be reduced in their intensity.

The Board of Directors of the Bank for International Settlements on July 11, 1932 said that Gold Standard still remained the best standard for free flow of trade and international financing. For this, international collaboration combined with national efforts must restore equilibrium in the financial and economic structure of the various countries of the world.

Thus we see that the best monetary opinion throughout the world favours a return to gold. India should try to fall in line with the major countries of the world, instead of pursuing her own monetary policy. The Gold Bullion Standard and the proposed Reserve Bank, would bring the Indian Monetary System into conformity with the recognised monetary theory and practice of the more advanced countries of the world.

RECENT DEVELOPMENT OF MONETARY THEORY SOME CONTRIBUTORY FACTORS

BY

S. THOTHADRI IYENGAR, M.A., .

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I

Monetary theory has in recent years been rapidly developing, largely as a result of the terrible experiences of the War of 1914 and of the tremendous problems that it has left behind. At no other period in modern history has there been so remarkable an elaboration of monetary theory, because at no other period did a war lead to such widespread repercussions in the world of industry, banking and finance.

It must be admitted that there are certain monetary experiences common to all wars, such as (a) a rapid rise in prices, due partly to the enhanced demand for all kinds of 'war' goods and services, and partly to the dislocation in the machinery of production caused by the withdrawal of thousands of men from industry to the fighting line; (b) an overissue of paper money by governments because of their resources and those of banks being severely over-taxed; and (c) a booming of industry after the close of the war arising naturally from the need to rebuild the shattered economic life of the countries affected.

All these phenomena were seen in the wars of the 19th century—the Napoleonic War, the American Civil War, the Franco-Prussian War, etc. They were also present in the War of 1914 and in the years following it; but their recent incidence has been world-wide owing to the fact that this has been the greatest of wars in the modern era. One need only instance here the collapse of currency and the soaring of prices to fantastic heights in

Germany and the countries of South-Eastern Europe, the unprecedented additions to the public debt of the belligerent countries, and the great boom of 1919-20. There is, then, a difference in scale between the problems created by the Great War of 1914 and the problems created by earlier wars, and this difference in scale must itself largely explain the impetus that has been given in recent years to the development of the theory of money.

A feature of the last war that places it in a class by itself needs special mention—namely, Reparations and War Debts. The financial liabilities of Germany in respect of reparations payable to the Allies, and of most of the Allies in respect of war debts owed to the United States of America, have been responsible for huge transfers of purchasing power, the flight of gold from debtor to creditor countries, the depreciation of currencies, and chronic deficits in National Budgets.

II

Our monetary troubles, largely a legacy of the war, have been intensified by the rapid growth of a spirit of economic nationalism. "Every nation for itself and devil take the hindmost" seems to be the motto of the hour. The ideal of economic self-sufficiency is being ardently pursued by each nation when the dominant tendency that the evolution of economic life in the modern world has been revealing is the increasing interdependence of nations. Communications, markets, the operations of "high finance" are all international in scope. But the deliberate attempt made by national governments to go against this tendency and to construct a number of watertight national economic compartments has led to strange results.

A typical illustration of the troubles arising from economic nationalism is furnished by the history of the past ten years. During this period, gold began gradually to "silt up," first in

the United States, and later in France—the great creditor countries which had become entitled to huge payments from abroad on account of war debts, favourable trade balances and reparations. These payments had to be made by the debtor countries in gold. (Since the United States and France have always been strongly protectionist, their high tariffs have prevented payments being made to them in goods.) The drain of gold made it more and more difficult for the debtor countries to keep their currencies linked to gold. Many of them, therefore, had to go off the gold standard. This depreciation of their currencies tended to stimulate their exports; the creditor countries, now getting alarmed at the prospect of a spoiling of their home market by an inrush of cheap imports, raised their tariffs still further in self-defence. The debtor countries thus discovered that even by the depreciation of their currencies they could not make both ends meet. The only way for them to improve their position and to continue to meet their obligations without complete default was to purchase less from other countries and thereby to make the trade balance less adverse to themselves. They have therefore raised their tariffs! There is, today, a regular race between the nations in tariff-making matched only by the race in currency depreciation and the race in armaments.

Our intensely nationalistic approach to the problems confronting us is also well illustrated by our readiness to work for stability of the internal price-level in each country rather than for stability of the foreign exchanges; though, as Mr. J. M. Keynes has pointed out, “exchange stability only requires that the same standard of value should be adopted at home and abroad; whereas an internal standard, so regulated as to maintain stability in an index number of prices, is a difficult scientific innovation, never yet put into practice.” We feel, in other words, that it is worth our while to try a “difficult scientific innovation” in place of an older method simply because our attention is being turned more and more inward.

III

Apart from the above factors—namely, the aftermath of the Great War and the increasing virulence of the nationalist spirit—the changes that Time is bringing about in our workaday world have themselves been responsible for a swift progress in the realm of thought. The growth of population, the increasing complexity of the mechanism for the production and distribution of wealth, and the consequent elaboration of the credit structure by financial institutions are all of them forces that compel a more and more detailed working out of economic theory. For economics is a growing science, and it must develop *pari passu* with developments in the organisation of our economic life.

When one turns to pre-war monetary theory, one is struck by its utter inadequacy in relation to the problems of today. The quantity theory of money, for instance, might have been good enough for a period when such phenomena as devaluation, flight from gold, exchange controls, and ‘reflation’ were unknown, but it does not carry us far in our study of present-day problems. As society grows more and more complex, the organ of thought which would enable us to deal with our problems must also become correspondingly elaborate. For example an idea of the distance we have traversed since the pre-war era in our conception of how to work a gold standard can be gained from the following passage in Mr. Keynes’s *Treatise on Money*:

“Almost throughout the world, gold has been withdrawn from circulation. It no longer passes from hand to hand.....It has become just a standard of value: and it only keeps this nominal status by being handed round from time to time in quite small quantities amongst a group of Central Banks, on the occasions when one of them has been inflating or deflating its managed representative money in a different degree from what is appropriate to the behaviour of its neighbours. Even the handing round is becoming a little old-fashioned, being the occasion of unnecessary travelling expenses, and the most modern way, called “ear-

marking," is to change the ownership without shifting the location."

Further instances of the development of monetary theory under the stress of the growing complexity of economic conditions can be seen in the "compensated dollar" plan of Professor Irving Fisher (according to which only gold bullion dollar certificates would circulate and the weight of the gold to be given on their redemption would vary periodically, on the basis of an index number, so as to keep the buying power of the dollar always the same); the "purchasing power parity" theory of Professor Cassel (the theory which explains how the rates of foreign exchange are likely to be determined when countries have depreciating currencies not linked to gold); and the theories of the Bank Rate and of the Credit Cycle worked out by Mr. Keynes in his analysis of the 'pure theory of money' in the first volume of his *Treatise* (an analysis which has evoked a good deal of controversy among economists—a controversy revealing the 'pains of growth' in the general body of economic thought).

IV

A few concluding reflections on the future of monetary practice and theory may not be inappropriate.

Nowadays we hear a good deal of talk about "managed currency" and "planned money," but it is permissible to doubt whether such planning will be quite a success when other aspects of economic life are not similarly planned but are left unregulated. No doubt "the keystone of an ordered economic system is a Money that fulfils its function" but the focussing of attention on the position of the keystone, unaccompanied by a scrutiny of the other parts of the arch, may not be conducive to the stability of the edifice. Mr. Paul Vinzig is an extreme exponent of this view. He considers it "a grave inconsistency to advocate a managed currency in an unmanaged economic system" and he thinks that "planning should be adopted first in the sphere of production and

distribution before it is applied to monetary policy." One need not go the whole way with Mr. Einzig to admit that there is a good deal of force in his contention. Currency "cranks" and experts will do well to bear in mind this point of view in their anxiety to renovate the financial machine.

Some distinguished economists and men of affairs—writers like Mr. Keynes and Sir Arthur Salter for instance—favour international action to ensure approximate stability in the value of money and in the world price level. But they are at the same time fully aware of the formidable obstacles that stand in the way. "A concerted world monetary policy, with an International Bank as an instrument to help in applying it, would be of inestimable value to world trade. But it will be both impracticable and useless unless other policy, in particular, commercial policy, is directed to the same end. An international money system or Bank can never function in a nationalistic world." (*"Recovery."*) Such misgivings have been amply borne out by recent events. The World Economic Conference which met in London last June collapsed in a few weeks, thanks to the incompatibility of the aims pursued by the several nations represented in it. When the text of a joint declaration on which the gold standard countries and the rest had agreed was cabled to President Roosevelt, he sent a reply rejecting the declaration and pointedly observing that "the sound internal economic system of a nation is a greater factor in its well-being than the price of its currency in changing terms of the currencies of other nations" and dismissing an international monetary standard as "one of the old fetishes of so-called international bankers." The Conference never recovered from the shock of this blow, but this blow was only the last of a series! Who will be bold enough to predict, in face of all this evidence to the contrary, the establishment of a successful international monetary standard in the near future? It is clear that the duty before economists and financiers is to work for a revival of prosperity through schemes less pretentious and more practical.

CONFERENCE PROCEEDINGS

WELCOME ADDRESS

BY

RAO BAHADUR S. E. RUNGANADHAN, M.A., I.E.S.,

Chairman, Reception Committee

YOUR EXCELLENCY, RAJAH SAHEB, MR. PRESIDENT, LADIES AND GENTLEMEN,

As Vice-Chancellor of the Annamalai University and Chairman of the Reception Committee, it is a very great privilege and a pleasure to me, indeed, to extend a most cordial welcome to the distinguished delegates and visitors to the Seventeenth Indian Economic Conference, which is meeting under the auspices of this University. My first duty is to express our deep sense of gratitude to His Excellency for his great kindness in coming here at this season all the way from Madras for the purpose of inaugurating the Conference. It is fitting that the Conference should be opened by one, who as the Head of the Government of Madras, has at all times shown the deepest solicitude for the well-being of the people of this Presidency. As this will, in all probability, be His Excellency's last official visit to this University, I may be permitted to take this opportunity of conveying to His Excellency the warmest thanks of the Authorities of the University for the keen interest he has always taken in its welfare.

Though we shall be sorry to lose His Excellency from our midst a few months before the expiry of his term of office, we all sincerely rejoice that His Excellency has been appointed to act during those months as Viceroy and Governor-General of India. We beg to offer His Excellency our most respectful felicitations on his new appointment and wish him all happiness and success in his exalted position as the chief representative of His Majesty the King-Emperor in India.

In offering a hearty welcome to the members of the Conference who have come from various parts of India, far and near, I regret to say that our arrangements for their accommodation and comfort during the period of their stay here have been considerably marred by a devastating cyclone which swept over this district a fortnight ago. The storm was one of the severest which has ever struck the Coromandel coast, and caused serious damage to life and property. The University suffered badly. Roofs were blown off, a few buildings collapsed, the gardens were completely destroyed and hundreds of trees have been either uprooted or badly battered. As it was felt, however, that the Conference could not be postponed, hurried efforts have been made to remedy the damage as far as possible and to set things right. In these circumstances, I hope the delegates and visitors will be good enough to overlook all shortcomings in the arrangements which have been made for their personal comfort.

The Conference meets at a critical time in the history of our country, as several Economic problems are at present clamouring for solution. The economic blizzard which has been blowing over the whole world for the past three or four years, has produced acute distress in India. So far as South India is concerned, our agriculturists have been harder hit than other sections of the population. In the last few years the burden of indebtedness has become more heavy and widespread, and many a prosperous landholder in these parts is now faced with utter ruin.

Since 1929 when prices began to fall, it has not been possible for the cultivators to repay their loans, and a good many have not been able to pay even the interest due on the loans. Indebtedness has been the bane of Indian agriculture—our most important industry, and with the burden greatly increased at present, measures to deal with the situation are more than ever imperative. Whatever Government may be able to do in the matter, a great deal depends on the people themselves, and it is to the popular movement of co-operation that one looks for the inauguration of

right policies. Unfortunately, the co-operative movement itself is hampered by many difficulties, chief of which is the question of overdues. It looks as though the paralysing effects of indebtedness have touched the very agency which was intended to relieve indebtedness. While the individual borrowers are not able to repay their loans to the primary societies, they in their turn find it impossible to meet their liabilities to the central institutions.

It is gratifying to find that the co-operative movement is one of the subjects to be discussed at this Conference. I trust that you will be able to suggest measures which while serving the ends of co-operation, will be in harmony with the larger economic life of the country.

Another question which is to be discussed at this Conference is the problem of population. The increase of the population during the decade 1921-31 by over 10 per cent is alarming in view of the extremely low standard of living. To a country where the average income of the whole population is none too high and where the rate of economic development has been none too fast, this is bound to be an event of serious consequence. Our present difficulties as well as the menace of the future point to the necessity for proper adjustments in order to cope with the situation.

One of the most interesting ideas which has become familiar to us in recent years is the idea of planning. We have suffered an unplanned economy long enough to know that a haphazard and empirical disposition of economic forces though it might ensure economic welfare under favourable conditions has an inherent tendency to break down in critical periods. What is needed is a plan, which while properly appreciating the direction and degree of change will provide for responsive adjustments thereto. A comprehensive study is essential for the formulation of any programme of economic development, and the announcement by the Government of India of the appointment of a Committee of experts to make an economic survey of India is particularly gratifying. The Conference has chosen "Economic Planning and Economic

Survey " as the current topic for discussion, and your deliberations in which we are glad to learn that Dr. Robertson will participate, will, I am sure, be of considerable value both to that Committee and to the Government.

It is often said that in regard to the diagnosis of economic troubles and the prescription of suitable remedies, there is much variance even among economic experts. One possible explanation of this divergency may be that many economic questions, notably those relating to currency and finance, are largely political. You may remember the story of the man in Boswell who said that he had tried to be a philosopher but found that cheerfulness was constantly breaking in. Politics, in India more than in other countries, has a most disturbing way of breaking into the consideration and discussion of almost every question of public importance, whether economic, social or even religious. You, however, as distinguished scholars and teachers of Economics will, I am sure, deal with the questions before you dispassionately and in a truly scientific spirit, and your opinions and constructive suggestions should be highly useful not only to those who are responsible for the administration of the country but to every intelligent citizen who is in these days called upon to understand and pass judgment on various economic questions. I spoke to you a minute ago of the great damage caused by the recent storm. But Nature, while quick to destroy resuscitates with equal swiftness. The trees and shrubs which stood bare a few days ago are already putting forth tender shoots and are beginning to clothe themselves with green leaves. But the havoc wrought by man, either through ignorance and folly or through the lust for wealth and power, is not so easily repaired and the road to recovery has necessarily to be a long one. The situation, however, is not beyond hope. As Sir Arthur Salter in the Epilogue to his absorbingly interesting book on *Recovery* says:—"We are, if we could but grapple with our fate, the most fortunate of the generations of men. In a single life-time Science has given us more power over

Nature, and extended further the range of vision of the exploring mind, than in all recorded history. Now, and now only, our material resources, technical knowledge and industrial skill, are enough to afford to every man of the world's teeming population physical comfort, adequate leisure, and access to everything in our rich heritage of civilization that he has the personal quality to enjoy. To face the troubles that beset us, this apprehensive and defensive world needs now above all the qualities it seems for the moment to have abandoned—courage and magnanimity."

Let us hope that we shall face our own troubles with courage and magnanimity and that by the united efforts of the Government and of public bodies, of our financial magnates and of important organisations like yours, sound policies may be inaugurated and a programme of reconstruction laid down, which will set India definitely on the path of economic betterment and progress.

I request Your Excellency to be so good as to declare this Conference open.

INAUGURAL ADDRESS

BY

HIS EXCELLENCY THE RIGHT HON'BLE LIEUTENANT-
COLONEL SIR GEORGE FREDERIC STANLEY,

P.C., G.C.I.E., C.M.G.,

Governor of Madras

MR. PRESIDENT, LADIES AND GENTLEMEN,

Before declaring this Conference open I desire to thank you, Sir, most sincerely for the very kind remarks you have been good enough to make about me. I take it as a great honour that I should have been appointed to the highest post in the Indian Empire, and the only regret that I feel is that it entails my leaving for some months this Province of Madras where I have had such a happy time and which I have learned to love.

It is a source of great pride to me that I should be asked to open this Conference but it would not only be an impertinence on my part,—it would be sheer folly—if I were to attempt to speak, on most of the subjects which are to be discussed to a gathering composed, as it is, of gentlemen whose fame as economists goes far beyond the borders of their own land.

Perhaps, however, as a mere layman I may be allowed to put in the form of a question what has long been and still is a puzzle to me. How is it that we have not yet been able to solve the problems that are confronting the whole world when there are so many gentlemen who have made a lifelong study of the subject? Can it be a fact that these questions are insolvable? I cannot believe it. Mr. Runganadham in his speech has suggested that economists in all parts of the world differ so radically on these topics that in this case there is confusion and not wisdom in the

multitude of counsellors. It may be so—I do not know, but I for one hope that this Conference will lead to the solution of at least some of our more pressing problems.

I hope you will forgive me if I also refer to two matters to both of which Mr. Runganadhan has already referred. He said and I know it is correct that the depression from which we are suffering has hit the agricultural population very hard. I know that it is no consolation to the people affected, but it is possible that good may come out of evil. Good will have been done if the agricultural population learn that they cannot rely on always getting high prices for their produce and that, while in good times they will naturally raise their standard of living, it is wise in those prosperous times to lay by something to tide them over evil times that may come.

Closely bound up with this subject is the question of marketing and of cooperative societies. It is of course of very little value if the land is made more fertile and then the agriculturist cannot find a market for his produce. Here again it has always appeared to me that the producer in this country is too much inclined if he has lost his market to sit with folded hands and demand what the Government is going to do, instead of bestirring himself to try and find another outlet for what he has to sell. Short of actually selling, the Government should and will do all that is possible to help, but the ryot must learn to rely first of all on his own efforts.

That brings me to the next point I wish to put before you—the question of cooperative societies which I am glad to see will be discussed. Cooperative Societies as we understand them in England do not exist in this Province. In England they act co-operatively in both buying and selling, and this is to the great advantage of their members. I can perhaps best illustrate what I mean in this way. Suppose there are fifty people each wanting on an average two hundredweight of some fertiliser. That, if my arithmetic is correct, makes a total of five tons. If each individual

were himself to buy two hundredweight he would be buying it at the retail prices, which is of course, higher than the wholesale one. But if the cooperative society were to buy five tons they would get it at wholesale prices and they can then retail it to their members at practically wholesale prices. So it is with marketing the produce, that cooperative societies, provided energetic and able presidents and secretaries are in charge, can help very largely in this matter. But in this Presidency cooperative societies do nothing of the kind—their name is really a misnomer and they are in effect “lending societies” and nothing else. I have ventured to speak to you at some length on this subject because I have had experience of cooperative societies and their work in England, and I feel that such work could be done here if these societies were run on similar lines. And now, gentlemen, I will not detain you any longer. I wish you all success in your deliberations, and I hope that as a result, we may be able to find some solution of those undoubtedly serious economic problems from which not only this Presidency but the Indian Empire and the world at large are suffering so severely.

PRESIDENTIAL ADDRESS

BY

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MEASUREMENT IN ECONOMICS

Is Economics a Science ?

Is economics an exact science in any such sense as physics or chemistry? Is it even an exact descriptive science such as botany or zoology in some of their branches? For all its use of business terms, is it even a practical science such as engineering, or medicine, or agriculture?

Can economists build bridges across the abyss of depression? Can we create a tougher and more elastic substance for our money? Can we grow a new species of cotton to resist falling prices? Can we inoculate a nation against the disease of a feverish and unequal circulation of its wealth? The physicist has controlled the giant forces of flowing water and electric power, but we economists are asked to control still greater forces—the lust for profits, the lust for power itself.

The world today is like the man who spent his time inveighing against doctors until he fell ill, and sent for all the doctors in the town. When one of his friends protested that he had had no faith in doctors, he replied, “ No, and when I get well I will kill them all, if they do not come and cure me now! ”

For many years the world has been breaking the laws of health and now it is blaming the economists for not prophesying all its ills, and is begging them to cure it. Doubtless the world will also recall the proverb, that while doctors disagree, the patient perishes! The world is demanding that economists deliver results, and economists are much divided. But in spite of criticisms fair and

unfair the doctors continued to perfect their science until their word is law in their own field. Yet the really good doctor is the first to admit how little he knows of the human body. Let us see whether to-day in this conference we can make one or two steps toward perfecting our science. At the same time, let us admit our failures and stop disagreeing amongst ourselves, and see whether we cannot command respect for those things which we claim that we do know.

Even economics has not been void of achievements. Two economic doctors, Or  sme and Gresham, discovered the specific cause of a whole group of currency diseases long before economists were heard of. Quesnay, himself a physician, and his friend Turgot, might have saved France from the revolution, but the aristocracy refused to swallow the bitter medicines, which could alone have saved them. And the English economists advised the tonic of free-trade, which though one may argue that it was only profitable for Great Britain at that time, kept the patient in good health for more than half a century.

It would seem that if economics is to cure the world's ills it must understand the causes, it must be able to state the remedies in no uncertain voice, and it must be able to show that the expected results followed the use of the remedies, at least in some cases. In short, it must become an exact science.

What is Meant by an Exact Science ?

1. Exact description or definition.
2. Exact measurement.
3. Exact laws inferred either from exact measurements or from exact experiments.
4. The ability to foretell by means of these exact laws the results of future experiments or measurements.
5. The verification and modification of these laws by testing their results under new conditions.

Experiments are not necessary to exact science. Astronomy is an exact science in which no experiments can possibly be made. Man can only wait for astronomical changes and measure them so carefully that he is able to foretell many future changes. So exact is astronomy that the time and place of eclipses can be predicted to within a fraction of a minute or a fraction of a mile. But even here there is a small margin of error. It must be noted that 'exact' means 'exact within certain limits.'

It is necessary to repeat this because it is so often suggested that economics cannot become exact because it cannot make experiments. Economics is exactly in the position of astronomy in having to wait for changes and measure them when they come. Statistics take the place of experiments. But it must be admitted that the astronomer would be more in our position if some of the planets were inhabited by such huge animals that they could influence the motion of their planet if they all got on one side of it at once. Even then, though they might cause it to fluctuate, they probably could not change its course greatly. The astronomer is able to predict because, though many causes are acting, very few of them are strong enough to change his results. The margin of error that remains is due to the causes which are unknown, or whose results are uncalculated. Similarly, the physicist is able to predict because in his experiments he allows only one or two causes to act. Professor Irving Fisher has said that if we ask the most learned physicist to foretell where a newspaper dropped from a window will fall, he can do little better than a man who knows nothing of physics. If the wind is not too strong, he can perhaps set limits to the area within which it will fall, or the time it will take to land, but the margin of error must be very wide. Ask him to tell how long his motor will last. Ask him how much rain will fall in July, or on any particular day in July. If his science is applied to the ordinary problems of life, we find that physics is not much more exact than economics. We question whether the laws of wages have failed, if equal wages are not paid for

equally hard work, or if one income rises high above others. Yet we do not tell the physicist that the law of gravity has failed if an air-plane rises from the ground, nor do we blame him when it crashes. We believe there are physical laws in spite of these happenings.

In botany and zoology also experiments are made, but very little forecasting is done. The zoologist would be astonished if he were asked to prophesy the number of books on economics which would be eaten by white ants next year. The botanist cannot foretell how many roses a rose-bush will bear. He cannot tell the results of his ordinary experiments. The biologist makes a great number of breeding experiments and selects those results which suit his purpose: He can experiment with guinea-pigs but when he comes to man on whom he cannot experiment he has to be content with statistics. But the economist who must always make all his experiments with man is in a worse position than the physicist would have been, if he had had to determine the law of gravity by dropping cats, or to gain all his knowledge of trajectories from pole-vaulting.

Even if we exclude forecasting and experimenting, by which it is fashionable to test the progress of science, we still leave the tests of exact description, exact measurement, and exact laws. We have now great libraries of descriptive economics. We are beginning to have in some countries great masses of fairly exact statistics, which descend upon us like rakings of hay from a hay-loading machine, faster than we can spread them out or pitch them into order. But we have not even begun to describe economic phenomena as accurately as the botanist and the zoologist have described the characteristics of orchids or butterflies, when dividing them into families and species. This decade, for the first time, the United States Bureau of the Census has attempted to classify all the counties of the country according to percentages of various crops grown or the produce of dairies or orchards. This has meant the accurate definition of various types of land utilization in terms

of measurable data. Before we can have either experiments or forecasting, before we can have exact laws, or even exact descriptions, it is necessary to have exact measurements. Mere counting may be enough for descriptions of phenomena such as numbers of petals and stamens, but not for determining relationships. To me it appears that exact measurement is the great need of economics today.

We have been measuring with money, and it is as if we had been measuring with an elastic, an elastic that some one was pulling, someone who did not want us to measure accurately. But we have somehow persuaded ourselves that the elastic was a good measure. We have kept on repeating "other things being equal," "other things being equal," when other things could not be equal. Sometimes we have even forgotten to repeat that magic charm and when we have repeated it, we have forgotten its meaning. It is quite obvious that we need other measures to check the money measure, when that measure changes more or less rapidly. The early economists used grain and labour as measures. Ricardo was careful to distinguish between money-rents and grain-rents. They tried to measure value in terms of labour. I think it is absolutely essential to get back to their practice. The first step I would advocate is that we should look behind money. We should look for the goods and the labour. We have been living in a money illusion. George Bernard Shaw has said that at the World Economic Conference every nation was trying to see how much paper money it could get, and how many goods it could give away. Just as the French police had their motto "Look for the women!" we must be constantly telling our pupils, "Look for the goods, look for the labour!"

If economics is to be of any use to the world we must answer every question in terms of goods and labour as well as in terms of money. We must state the results of every economic change in money, in goods, and in labour. We must measure in different kinds of goods, in food-grains, in metals, in agricultural products,

and in non-agricultural products. We must measure in labour-time and in labour-power. To a certain extent we have done this. We have spoken of money wages and real wages. We have divided the index number of wages by the index number of prices to determine an index of real wages. We have spoken of output-per-capita and output-per-hour and wages-per-hour. Professor Fisher has emphasised the relation between interest in money and interest in goods when prices change. But we need to do this continuously, and to state the results of every problem in terms of goods and in terms of labour. When prices were fairly steady we were lulled into forgetfulness, and now that they are rocking and swaying we are all at sea! Take value for example. We say that value tends to be equal to the cost of production. But how do we measure this cost of production? In money? The prices in two countries may be very different. In goods then? In what goods? In goods used by the labourers? The same goods may be earned by the labourer in one country with many more hours of work. Then the real wages per hour will be higher in the country with shorter hours. If prices are also lower in that country then it is just possible that money wages per hour may be the same in both countries. But equal hours may not mean equal work. If the labourers work harder in the country with shorter hours and lower prices, it is possible, though not likely, that equal goods received or equal real wages may measure equal energy spent. And if we also assume that the same expenditure of energy results in the same production in the two places, then the two costs of production will be the same in terms of energy and in terms of other goods which can be exchanged for those produced; but the costs of production will not be the same in terms of labour-hours nor in terms of money. The money cost and the time cost will be greater in the country with longer hours and higher prices. The problem is, of course, far from being solved. We have yet to determine what would happen if the two countries were to trade with one another. Would the more efficient country find its prices rising and its hours

of labour increasing, and would wages increase more or less than hours of work, more or less than prices? Would the less efficient country decrease its money wages and its prices in proportion in order to meet the competition, or would unemployment reduce hours and wages, so that real wages were lowered? It is possible that the capitalists of both countries may profit, while the labourers of both suffer. And this is only one of many basic assumptions which might have been made!

Moreover, we have not considered the value of leisure in the country with the shorter hours. The leisure hours are a great part of the labourer's real wages. We can remove some of the reproach that we do not measure human welfare, if we measure the value of leisure. In terms of money this must be priced at the wage per hour for the working hours. This would mean that the real wage in terms of money would be measured by all a man's waking hours multiplied by his wage-per-hour. The only difficulty with this measure would be in cases of enforced idleness, or enforced overwork.

Measurement in terms of goods is especially necessary when the relative value of two currencies is changing.

Consider the question of our trade with Japan, when Japan had reduced the value of the yen. It was then possible for Japan to reduce the price of cotton cloth in India in terms of rupees. If Japan reduced the price of cloth by one-third, possibly she might be able to double the sale of that grade of cloth. In that case Japan would get 33 per cent more money from India than before, while India would get 100 per cent more cloth from Japan. But whatever the exact figures Japan could not get more rupees from India than before unless India bought cloth which had increased by more than the fall in price. On the other hand, if our tariff had not been increased, Japan would almost certainly have continued to buy raw cotton in India since India's cotton is of the grade required to manufacture the cloth she sells to India. Japan would have had to buy more cotton from India probably at a higher

price. Therefore, the money which Japan paid to India would increase more than the raw cotton which India sold to Japan. If the raw cotton and the cotton goods be both measured at any fixed prices between the two sets of prices, then India has gained in goods and in money. On the other hand, if a number of Indian mills have become idle and the labourers unemployed, or their wages greatly reduced, it is evident that the value of Indian labour has been reduced and it is possible that this loss is greater than the gain. The problem cannot be solved completely without knowing the exact value of all the ratios between goods and labour and rupees and the yen. It is also necessary to know whether real wages have been reduced in Japan and to consider the long period reactions. Has Japan made a present to India at the expense of her labourers? If so, can she continue to do so? Are her labourers more efficient than those of India? And if so, how can Indian industries best be forced or stimulated to increase their efficiency? It is evident that the answers to all these questions depend upon measuring in goods and in labour.

In all the above examples, we were dealing with only one or two kinds of goods, whereas in most practical problems it is necessary to deal with many kinds of goods. It is evident that we cannot get very far unless we can stabilize our currencies, so that money will actually measure either goods or labour. Since money cannot measure all kinds of goods and all goods are made by labour, it might seem more reasonable to let money measure a fixed quantity of labour. There are various kinds of labour but it might be possible to make a rupee equal a certain number of hours of the most unskilled labour, such as the labour of coolies or sweepers or wood-cutters. Then the wages of every other kind of labour would perhaps measure how far it has risen in the scale of efficiency. But we should still have the difficulty of paying debts fixed in money in terms of goods, which means paying two or three times the quantity of goods in order to pay off the same money, for it seems impossible to fix debts in terms of labour. It is, therefore, better

to stabilize money, if possible, in terms of goods. Gold has failed entirely as a standard of value. It has become too small a part of the wealth of the world, and is too easily hoarded. It is therefore such a narrow base that prices cannot maintain their equilibrium upon it. The ideal would appear to be a tabular standard in which the metallic exchange value of paper money would be varied in accordance with an index number of prices. The difficulty is to find an ideal index number, since different prices are more important to different parts of the country. When this Association was first started there was a proposal to make a geographical index number for different places in India. For example, wheat is more important in the Punjab, rice in Bengal, jawar in Bombay. But it is possible that the average price of all the food-grains remains much the same in different provinces, especially if weighted according to the quantities consumed. Food is dearer in the cities but manufactured articles may be cheaper there. Here too, it is just possible that changes in one price balance changes in another. This is a problem which urgently needs to be investigated. The difficulty with the index number is that the changes must be made by some official and there will always be suspicion that the Government is manipulating the value of money. Businessmen wish to know exactly what money means in terms of concrete goods, so that they can make at least an effort at forecasting prices and costs.

A better proposal from the practical point of view is that of Mr. Clark Warburton who was formerly an editor of the Journal of our Association. This is that the unit of money should always be equivalent to a certain number of pounds of wheat plus a fixed number of pounds of cotton plus a fixed number of pounds of iron, and so on, for at least ten or twenty of the staple raw materials. This plan should have the very great advantage of stabilizing the prices which show the greatest fluctuations, and should therefore stabilize all other prices which ordinarily fluctuate within smaller limits; but of the latter result we cannot be quite sure. The Govern-

ment of the United States had an unusual opportunity to introduce such a system when the Federal Farm Board had purchased enormous quantities of wheat and cotton under President Hoover; and it is even possible that such a change might have saved him the presidency, though it is more probable that he would have been turned out for making the change, for the people would never have known from what deep pit he had saved them. The difficulty with the plan is that there are many grades of wheat and cotton! If one particular grade is specified it may sometimes be unusually scarce or plentiful. This difficulty could be got over by fixing a ratio between several of the medium grades, though these fixed ratios might cause some of the difficulties of bimetallism on a small scale. It is, of course, only the ratios between a few grades of the same commodities that would be fixed. The ratio between wheat prices and cotton prices would not be fixed at all, but only the quantities which in combination would be exchanged for the unit of currency, either paper or a token coin.

But since it is difficult to persuade people to take more than one step at a time and the above plan does involve certain administrative difficulties, it appears to me, that it is more practicable at present to advocate what may be called a symmetrical bullion standard. This is similar to Mr. Warburton's plan except that a small number of metals are substituted for the longer list of raw materials. The unit of currency, either paper or token coin like the rupee, would be exchangeable for a fixed number of grains of gold plus a fixed number of grains of silver plus a fixed number or ounces of copper plus a fixed number of pounds of iron, and possibly other metals. It should be easy here in India, where we have already been exchanging the rupee for a fixed quantity of gold bullion, to say, that we would now exchange it for a smaller quantity of gold bullion plus a small quantity of silver bullion plus fixed quantities of other metals. It would not be difficult to establish statistically the particular combination of any given set of metals which would have kept prices most nearly stable in the

past, whether stability is interpreted as reducing to a minimum either the absolute or the relative deviations, or the squares of these deviations. If we find that a particular combination of quantities of a certain set of metals would have kept prices nearly stable in a number of different countries and also in different periods, the argument for that particular combination of metals would be very strong. It would, of course, be necessary to make some allowance for the possible money demand for these metals and the fall in the money demand for gold. But if governments and banks continued to keep reserves largely in gold, as they could do by calculating the value of the combination of metals periodically in terms of gold, the change in the demand for the various metals would be comparatively small. If no combination of metals proves to have outstanding value, then I would suggest that the quantity of each metal used be roughly in proportion to the quantity which is annually produced. It cannot be emphasised too strongly that this system is free from all the difficulties of bimetallism, and that it works automatically and is not dependent upon the arbitrary decision of any official, so that it is easy for banks and dealers to make the necessary calculations and forecasts. It is true that it would not smooth out all the fluctuations of prices and might even cause some new wrinkles of its own, but it would make impossible any such wholesale slaughter of debtors, as occurred in recent years. I do not think there is any need to wait for international cooperation in the adoption of such a scheme, but I would point out that the present, when many great nations have abandoned the gold standard, is an unparalleled opportunity for the introduction of a better standard. It is also a great opportunity to stabilize the dollar-pound ratio at five dollars to one pound, instead of an awkward ratio like 4.86 and a fraction, as Jevons advised more than sixty years ago, when the dollar was off gold after the American Civil War. As for the rupee sterling ratio, I have not quite been able to understand why there is so much agitation just now to reduce it to 1 sh. 4d. in British paper, when

it is already around 1 sh. in gold. The 1 sh. 6d. ratio has now been sanctified by about nine years' usage, whereas the 1 sh. 4d. ratio had been sanctified by sixteen or seventeen years of use. But if it is now necessary to inflate the rupee still further in order to save the Indian cultivators from their creditors, a change of only 2d. sterling or 1.4d. gold will hardly be sufficient. If the Indian farmer is hit, so is the British. I think it would be far better to agitate for the stabilization of both the rupee and the pound on a symmetrical standard at such a level as to raise prices as much as necessary to relieve the burden of debts.

Even the physicist has trouble with expanding and contracting measures. For many of his experiments, he needs a room with absolutely constant temperature. He has even invented a machine to bring the temperature of a room back to the level he desires whenever it starts to fluctuate. Such a machine we too must build with our index numbers and our multiple correlation, whether it be symmetallism or a tabular standard based on raw materials.

But no matter how much the money measure may be perfected, we shall still need other measures. Other sciences have not been content with one kind of measure, nor have they secured perfection in a day. Think of the long development from the hour-glass to the modern machines which measure thousandths of seconds! Think of the thermometers, barometers, speedometers, galvanometers, measures of electricity, of steam pressure, of the efficiency of engines,—of the bewildering array of units of measurement, such as foot-pounds, horse-power, candle-power, watts, amperes, kilowatt-hours, eusecs, and many others. We, too, must be measuring the efficiency of the human engine in turning fuel into work, and the man-power generated, and the electrical energy used up in mental work. We are already using their chronometers in timing human fatigue, though perhaps the scientific management expert would scorn to be called an economist!

Medicine, too, which deals with man, is inventing new measures. It began long ago with temperature, when it discovered

that the whole range of life and death lay within ten narrow degrees from 95 to 105. It also measured pulse and respiration, but these were not enough. It has gone on to ova counts, to blood-cell counts, and to basic metabolism. By measuring the heat in the breath, it has discovered that some people burn faster than others. And what is this but the rate of consumption? Is it not already one measurement of the efficiency of the human engine? We are heirs to all the measurements of all the sciences! We shall use them all, and we shall yet discover the true foundations of things which perplex us sorely now. Just as medicine discovered that the range of life lay between 95 and 105 degrees, perhaps, when we have perfected our measurements, we may learn the limits of economic life. We shall know the limits of price fluctuation within which small banks and small farmers may live and thrive, and the limits of minimum wage and maximum income beyond which individual hopes and individual liberty must perish!

Biologists, too, have used many measurements such as the cephalic index and nasal index of anthropology, the birth-rates, marriage-rates, and survival rates of vital statistics, and all the statistical coefficients of biometry, but they do not claim to have solved completely the problem of evolution.

Economics likewise has never stood still. It long ago began to use vital statistics. It soon began to adopt the statistical methods of biometry. It began with the fundamental measures of quality, time, distance, and labour, which are exactly the fundamental measures of physics,—mass, time, space, and energy! But because we economists did not know physics, even of the most elementary sort, we have gone astray. We failed when we tried to combine these elements. We identified labour with time. We did not know that work is of the same dimensions as energy, that energy is both potential and kinetic, that raising a building and the storing of foodgrains and the training of students are all storing up potential energy. We used the word efficiency, but we

did not know that it was of the same dimensions as power, and that it was equal to work per time. We frequently forgot that when we spoke of quantity we meant quantity per time, or rate of production. We pass from quantity on hand in the market, to quantity in existence, to quantity in process of production, and so to quantity which can be produced during a period of time. We forget that demand and supply are practically always demand per unit of time and supply per unit of time. We started to speak of distance from the market, but we soon turned it into proximity, and then forgot about it altogether, except when we dealt with local discrimination. We started with the market in a central city and then extended it to cover a whole région (or the world!). We said that prices tended to equality in this whole region, and added in a soft voice that this perfection was prevented by costs of transportation. We admitted, after Von Thünen, that rents could be caused entirely by costs of transportation. And then we forgot all about these costs (even in international trade!). The specialists did not forget. They developed whole courses on the economics of transport. But we did not allow these to influence our theory. It is only just now that Miss Joan Robinson and others have begun to work on the theory of imperfect competition. We had to wait for the practical mind of woman to make our dreaming realistic. But perhaps we were not so much to blame. We were facing a problem in the relativity of time and space and the transformation of matter, which even physics has only now begun to perceive clearly.

When we came to problems of acceleration we were in still greater difficulty. We failed to distinguish between production and consumption at a uniform rate and at changing rates. Or, if we made that distinction, we often forgot to say whether the change in rate was a deviation from a uniform average rate to which we would be sure to return, or whether there was a gradual permanent speeding up or a gradual slowing down. Or if we remembered to say which, we were apt to forget which we said!

Surely it is essential to distinguish between several underlying situations before we discuss a problem in detail.

1. First, we have the hypothetical stationary state where birth-rates and death-rates, consumption, production, and stocks held over, wealth, population and fertility of land are constant, and all things move at a uniform rate.

2. Second, we have the equally hypothetical case where all the fluctuations are foreknown and foreseen. For example, there might be an annual seasonal change which was absolutely regular, but there might also be a regular cycle of three and a half years, so that every change would repeat itself just once in seven years. In this case we should have speculative trade between country and country, and storing from year to year, but all so accurately calculated, that there could be no unforeseen profits or losses.

3. Third, we come to the case where the fluctuations are unforeseen and therefore the calculations cannot be accurate, but we suppose that the average wealth and population and the averages of all the other phenomena remain the same if taken over a long period. There would now be unforeseen profits and losses, but they would cancel each other in the long run. In all these three cases there have been no improvements or inventions and no decay.

4. In the fourth case we suppose that new ideas operate to increase wealth. The cost of production decreases in terms of labour-time, and the changes in the other phenomena may be examined under various assumptions concerning the reactions on population and leisure-time. It is probable that profits exceed losses and that population increases, though not in proportion to wealth or leisure or education.

5. Fifth, there is the case of decay, where wealth decreases, old arts are lost, and probably population and culture decrease, though not so rapidly as wealth. This is a

possibility which has been all too little investigated, and whose results must vary with the causes of decay.

The first and second cases are entirely imaginary, but are essential as points of departure, just as a knowledge of hydrostatics is an excellent foundation for hydrodynamics.

Still other measures must be introduced if we are to make economics a dynamic science. Already a number have been put into use, such as the ratio of agricultural to non-agricultural prices, and the ratio of the production of other commodities to the production of gold. Professor Fisher has introduced the 'Wantab,' which is equivalent to the marginal utility of a unit of money, as the unit of wantability or desirability. Many tentative laws have been suggested by statistics. It has been found that the trade of any town with the neighbouring cities varies directly as their populations and inversely as the square of their distances which is strongly reminiscent of the physical law of attraction. It is also suggested that land value going out from a centre of population varies directly as the density of the population and inversely as the square of the cost of transportation from the centre. Actual statistics seem to show that over a long period total wealth has increased almost as the square of the population, that is, wealth *per capita* has increased as fast as population. This dynamic law is very different from that of Malthus, yet it is not necessarily inconsistent with Malthus' fundamental idea, which might still hold true in the stationary cases. We have said that the exact mathematical formulation of Malthus' law was the least valuable part of his work. We have ridiculed Von Thünen because he wished an algebraic formula engraved on his tombstone. This is because we have had no conception of the scientific approach to an exact law by means of successive hypotheses and successive approximations. The law of Malthus was a first approximation. We have modified it to read that in any given state of industrial knowledge there is an optimum population, for which the income *per capita* is a maximum. If the population is greater than this,

the income *per capita* will diminish, as Malthus said, because of the pressure of diminishing returns. But if the population is less than the optimum, the income *per capita* will then also be less for full advantage has not then been taken of all the possibilities of increasing returns. Whenever there is any new invention which reduces the real costs, it becomes possible to increase the optimum population.

The iron law of wages and the law of the wages fund were both approximations. We now think that instead of all wages tending toward the minimum for existence the wages of any group tend toward the cost of maintaining an equal number of equally efficient labourers in that group. But there is now no limit to the possible increase in wages, for there is no limit to the increase in efficiency. Whenever there is an invention, as rapidly as the gain accrues to the labourers, it is divided between the standard of living and the increase of population. If the cost of maintenance is the level about which wages fluctuate under the stationary assumption, they must be above or below this level when conditions are changing, and can hardly go above or below the selling value of the goods, so it may be that Von Thünen was not so far wrong after all, but gave a first approximation to a law of wages under dynamic conditions.

We may not like these exact formulations, but like it or not, they are sure to come. If we do not cure the patient there are a host of other practitioners rushing in to occupy our territory. The geographer, the psychologist, the ecologist, the engineer, the business expert, the mathematician, the statistician, and the dietician without any knowledge of economic theory, are formulating laws. We must test these laws and use them and welcome them if they are right; we must modify them, try to discover the truth toward which they were groping, if they are wrong.

Possibly the greatest of all the difficulties that confront us today is the seemingly hopeless division of opinion amongst economists themselves. To some recent writers it appears that there

are five or six different schools of thought which are utterly irreconcilable. It is for this reason that the word of economists is not listened to with respect, and the world stumbles on in its old prejudices without even such help as we are ready to give it. Some economists are saying that debtor countries cannot pay unless they have a surplus of exports. Professor Cannan points out that if they did pay they would have a surplus of exports. The nation which owes is not ready to suffer the deprivation in goods and in leisure. The nation which should receive the money is not willing to distribute it in wages which would permit the goods to be bought.

We find some economists saying that we must use only prices, we must stop talking of cost and utility, and only consider the interrelations of prices. We must stop using utility for which we have no objective measure, and everything which smacks of utility, and use only those things for which we have a concrete measure. So they will measure everything in prices, and go on studying the relations between prices, and the relations between the wriggings of prices, prices which are wriggling like worms, as if the zoologists had been content to study the outsides of worms and had never used the microtome or microscope. On the other hand, we find economists who tell us that prices can measure nothing. They measure neither utility, nor love, nor character, nor anything worth measuring. Therefore we should stop using prices, which in practice seems to mean that we should stop measuring anything and deal in vague but beautiful words, if it is only by prices that we can compare the value of labour and apples and education. They feel that to measure in economics is as bad as to measure the value of a painting by taking the square inches of canvas. They would have economics abandon the hope of becoming an exact science. They would make economics forever an appreciative art, full of all the beautiful but unpractical jargon of art.

The utility concept has been one of the most fruitful ever

introduced into economics, fruitful both of exact thinking and of an impossibility of exact thinking. For we have insisted that utility was purely individual, a thing in each man's mind, the utility of one man no more commensurable with that of another, than the happiness of the optimist is with the joy of the pessimist in making others sad. Each man could maximize his own utility, but we had no knowledge by which we could maximize the total utilities of all. Even the mathematical economists are divided between those who begin with prices and those who begin with utility.

Is there any possibility of reconciling these two schools? Surely prices measure something; surely there is something under the clothing of prices which is the real throbbing life of society. Surely economic life is not to be separated from all that is great and good in the rest of life. Measurement is not all of art, but even the artist measures, and measures carefully, too. Those who want an exact science demand that every phenomenon should be defined in such a way that it can be objectively measured. Only so can changes in that phenomenon be related to changes in others by an exact law. Is it possible to satisfy them? Is it possible to measure satisfaction? If price measures the satisfaction of the buyer, does it also measure the labour of the producer? Is it possible to measure the exhaustion of hopeless toil, the nervous strain of fear? And yet if we do not, all our science of prices will only give us a science of profit-making! What is value? Is it not at least of the same dimensions as work? And is not work energy? Is not labour energy flowing into a commodity? Is not the commodity only a store of energy? Is not satisfaction energy flowing out of the commodity into the man? Perhaps we may yet use the basic metabolism of the physicians as one objective measure. If value is energy then we should be able to measure it in foot-pounds, as well as in units of heat or electrical energy. Who knows? Perhaps we may. A pound of silk is worth much more than a pound of cotton, but think how many more feet it has

travelled, the raw silk in the winding and unwinding of the cocoon, the finished cloth in the far greater number of finer threads per inch that must travel by bobbin and shuttle for miles before the cloth is complete. If we measure things pound for pound, the value of human flesh should be most of all. For years I have been saying that the true wealth of a nation was neither in its gold, nor in its exchangeable goods, but in the bodies and brains and characters of all its men and women. I have said that if we estimated the money value of a man, just as a machine, forgetting all that in which a man is better than a machine, remembering those things in which he is worse than a machine, still we should find that the people were worth more than all the wealth. Yet it never occurred to me before to measure men pound for pound against the most valuable kinds of goods. Using Dublin and Lotka's estimates in their book *The Money Value of a Man*, I find that at his maximum a professor is worth his weight in gold almost exactly. But his baby is worth three times its weight in gold. Even the labourer is worth many times his weight in silver and the labourer's baby is worth its weight in gold! If the average value per ounce of a human body is equal to that of silver or gold, the value of the heart must be greater than an equal weight of rubies, and the value of the brain must be greater than that of radium!

It is significant that the baby is worth more per pound than the man. With more equal education he would be worth still more. Some years ago the messenger of a bank was robbed in Allahabad. The judge inquired how much he had been carrying and was told that he frequently carried lakhs of rupees. On that day fortunately the sum was smaller. The judge then asked what he was paid. The chaprasi replied, "Fourteen rupees a month!" The judge then turned indignantly to the manager of the bank and said, "What! you have a man you can trust unguarded with lakhs of rupees and you pay him only fourteen rupees!" Certainly, the sum of fourteen rupees did not measure the character of that man. But possibly the judge was wrong! Possibly a higher

standard of living might have corrupted the man. His work did not require more energy or education. But if it was not best for the bank to pay him directly, the bank should have guaranteed his old age, and the education of his children. Nothing could have paid him so well as to see the value of his children raised. If prices do not measure character, still less do they measure love. And what shall we say of the huge wages of captains of industry? Do they measure the power he wields, for good or for ill? The love of power is stronger than the love of money. Even the child will give away a coin, but not his kiddie-cart or his tricycle! For these give him a sense of power. Why do men desire to drive fast cars and fast air-planes, even sacrificing their lives in the desire for greater speed? Is it not because their highest satisfaction is found not only in spending their own magnificent powers, but in controlling and guiding the flow of the greatest possible energy? Think of the countless expenditure of parents in little loving cares and worries. Children are a lot of trouble but they are worth it a thousand times over. Is it not partly because of the sense of power, the sense of creating something finer and more valuable than anything else in the world? Is not the love just measured by the care and the toil put into it? Is it not possible that when we have measured all the energy that goes into love and the pursuit of power and is expressed in character and creative art, we may find that the values men set on these things were not so far from the truth? If we find that sometimes energy is misapplied in vast advertising, in senseless exhibitions of power, in reaping the fruits which others have sown, we need not be surprised. Even a child with the slightest expenditure of energy may topple over a beautiful vase, causing it to smash to pieces, and to lose at once all the potential energy it had acquired. We do not therefore say the laws of physics were broken. Rather we consider it a proof of those very laws. It was by its own potential energy that the vase was broken, not by the energy of the child. Then why should we consider it a breach of the economic laws that the

value of the vase is gone? This value was also a store of labour. And possibly the child may even be taught for the first time in its life to appreciate beauty and the value of labour. It will also be necessary to punish the bigger children who break vases in order to prove their power, especially those who break men!

The most marvellous increase of wealth is in the training of children. We should take away from those who break men, and give to those who make men! The child who was worth his weight in silver can be made into a man who is worth his weight in gold, by training and education! This is the real alchemy! If the alchemist had only known, he could have created permanent gold, instead of wasting his time trying to create a gold which would immediately have lost its value, had he succeeded!

As Ostwald has suggested there are higher kinds of energy which may defy our measurements. It may be that the human body is always storing up more energy than it can ever give away. Even if we reduce everything to physical energy, we do not therefore destroy the possibility that joy is greater than pain. We are storing energy for immortality, and though the vase lie broken, the labour that went into it may still live on, and mould the spirit of the child who broke it!

REPORT OF DISCUSSIONS ON PAPERS

DISCUSSION ON POPULATION PROBLEMS

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PROF. K. P. MADHAVA of Mysore pointed out that the relative over-population is due to under-production, drain and maldistribution. Maldistribution or hoarding, its sinister brother, is really due to the disparity between producing and consuming. So a better distribution should be secured and hoarding prevented.

MR. D. N. BANERJEE of Dacca said that at present no alarmist view of Indian over-population need be taken. According to him more attention should be paid to economic development than to measures of restriction of population like birth control. He substantiated his statements with reference to Bengal by showing that Bengal can support twice the present population, if only its agriculture and industry are improved.

MR. S. V. IYER of Dacca pointed out that the present standard of living is very low and that the necessity for raising the same at the earliest opportunity is a very pressing one. He was for the establishment of clinics for the adoption of scientific Birth-Control which would go some way, if not a very great way, in the reduction of unwanted children. Birth Control does not at all mean sterilisation of the fit.

PROF. C. N. VAKIL of Bombay viewing the problem from the practical point of view said that there was a widening gulf between the means of subsistence and the growth of population. The widening of this gulf has been going on for the last seven or eight decades. In spite of all efforts to increase the economic progress of our country, the fact remains that the gulf has not yet been bridged. The Shastric injunctions also have been partly responsible for some increase in population. He would suggest, therefore, a happy combination of the two remedies of (1) the increase

of production and (2) the restriction of numbers, which is essential if an early bridging of the gulf between increase of population and food supply is desired. There was no opposition between these remedies, which were supplementary, though he had doubts as to how far the latter would be effective.

PROF. V. G. KALE (Poona)—The population problem cannot be strictly regarded as economic but must be viewed from the political, ethical and social points of view. Sociologists and Economists should pay heed to the consequences before they begin to put into practice borrowed ideas from the West, such as birth-control. If only one-hundredth of the energy that is spent in propagating the benefits of birth-control to the masses is expended in giving education to the masses, we should have better results.

DR. P. J. THOMAS (Madras)—So far as we are able to infer from statistics, say even for the last thirty or fifty years, population has not outrun the supply of food stuffs. The poverty of India is certainly less to-day than it was fifty years ago. To a certain extent maldistribution is responsible for there not being a corresponding increase in the income of the masses, with the increase in the total wealth of the country. Increase in production—agricultural and industrial—emigration and the following of the Brahmacharya Asram may be regarded as the possible remedies. At present there is no necessity to cut down numbers by injurious methods like birth-control.

DR. V. S. RAM of Lucknow, Mr. Ramamurti, Miss Ouwerkerk of Trivandrum, Prof. C. S. Srinivasacharya of Annamalai participated in the discussion.

THE PRESIDENT (PROF. C. D. THOMPSON, Allahabad)—If we can improve production in the villages it is probable that the standard of life will increase faster than population. It is therefore important to educate the people of the villages; as all improvements in production in the villages seem to depend upon education. Therefore I would solve the unemployment problem amongst the educated by sending them to educate the people of the villages. If we

can take education to the masses of the people so as to increase production and the standard of living, the population problem will take care of itself. For us the problem is Economic.

DISCUSSION ON CO-OPERATION

PROF. D. N. BANERJEE (Dacca) pointed out that moral indebtedness is not exactly due to uneconomic holdings but due to litigation, ancestral debt and ceremonial expenses. He stressed the importance of education of the masses in the uplift of the agriculturists. He also pointed out that recourse should be had to legislative enactments, as in Bengal, in the matter of the restriction of the high rates of interest charged.

PROF. KARVE (Poona) opposed Mr. Pantulu's view that the cooperative movement should be based on business principles. Mr. Ramdas, he said, opines that personal credit and landed security should be the basis of loans to members. But sometimes personal credit is very high where concrete credit is very low. In this sense the village moneylender is now more competent to look after really good men who have no security to offer.

Secondly, fluctuations in prices have been affecting the credit situation. They have reduced the credit worthiness of the rural indebted population. In general it may be said that patience marks the moneylender more than the cooperative societies. Nothing has done more to complicate the problem of rural credit than the inelasticity of the present land revenue system especially in ryotwari areas during times of depression.

PROF. KAMDAR of Baroda said that there cannot be any hostility between the policy of the Joint Stock Banks and that of the Central Cooperative Banks, if the latter do not deal in savings and current accounts. I also differ from Prof. Thomas. The village panchayat may be a powerful agency in the matter of the carrying on of the educational propaganda with regard to the cutting

short of unproductive social expenditure if better living societies are started.

The Registrars of Cooperative Societies should try to supersede and control rather than completely cancel societies in bad condition.

We are all suffering from a paucity of well-trained officers. A Cooperative College for India, qualifying people for cooperative business would be the way out of the difficulty.

PROF. V. G. KALE (Poona) said that the mistakes committed in the past have taught us a good lesson and hence the public may be more fit to be benefited by cooperative societies in the future.

Cooperative Societies are right in enforcing certain conditions before granting loans. Non-observance of the conditions led to many failures in the past. Intensive cooperative education would do much. The moneylender plays the cat-and-mouse game. We must copy him to some extent. In Bombay every effort is made before liquidation. One man is appointed and given complete control. Liquidation is the last resort. Cooperation cannot solve all problems connected with rural population. A profession of this nature led to undesirable results in the past in the case of many societies. So past blunders should be carefully avoided and the movement re-built on a new basis.

MR. B. L. PUNJABI, Registrar of Cooperative Societies, Bombay—Before criticising cooperation as a failure, one should ask the question, "What is the alternative?" Cooperation between officials and non-officials will do much. Bombay has encouraged non-officials to take as large a part as possible. Cooperative education is essential. Cooperation is a training to develop moral qualities, such as, mutual help, thrift and self-help. Societies must be first registered, then educated later.

MR. RYAN, Dy. Registrar of Cooperative Societies, Madras—All that cooperation can do for rural debt is to convert the unproductive part of the debt into productive debt, by lending strictly for productive purposes. I agree with Prof. Kale that cooperative

credit should be a controlled credit. We must try to lend in kind and collect in kind. In Arcot we are giving loans in four instalments, when the Inspector certifies that the loans are being applied as specified. Old debts are being wiped out in twenty years and replaced by productive debts.

MESSRS. V. T. ARASU (M.L.C., Madras), C. D. Nayagam, Prof. Madhava of Mysore, C. S. Srinivasacharya and Mrs. K. Alamelumangathayarammal (M.L.C. Madras) took part in the discussion.

The President, PROF. C. D. THOMPSON, Allahabad—I have been very much encouraged to find several speakers pointing out that we cannot eliminate rural debts but can only try to improve the conditions of credit and cost of credit. The aim of co-operation should be to help agricultural improvements and if agricultural improvements are to be made more credit will be required, not less. The Cooperative Banks have been too inelastic in their restrictions. It appears necessary that either the district banks should become branches of a Provincial Bank, or that the District Banks should be given much more freedom and control over the Supervisors. The frequent change of Registrars is another source of impediment.

Cooperation has not failed. It has never been tried out on a large scale over a whole district. It is useless to preach better living to the people, unless we make it possible for them to live better by agricultural improvements and cheaper credit for productive purposes.

DISCUSSION ON MONETARY THEORY

PROF. D. H. ROBERTSON (Cambridge)—Money could be used in two senses, in the abstract and in the concrete. In both these senses it has a present and a future use. In the abstract sense, its present use is as a measure of value and its future use is as a

standard of value. In its concrete sense its present use is as a medium of exchange and its future use as a store of value. In its use as a store of value it may be very dangerous, e.g., if all Indians stored gold and then let it go all at once, this might prove a great danger or a great benefit.

He generally approved a policy of execution of well-planned public works and a sort of controlled inflation as advocated by Mr. Muniswamy in his paper. But he differed from Muniswami, inasmuch as he (Mr. Robertson) thought that Roosevelt's policy was a mere patch work of ideas good and bad.

Can the world settle down to an international standard again? Only if the nations agree not to depreciate their currencies, but use fixed exchanges. The gold standard worked before the war because it was a sterling standard worked from London! Now there are many monetary centres, and a mass of short-term capital moves violently from one centre to another. It is hard to see how any international standard can work well for the rate of progress in production is greater in one country than another. If we keep money stable in terms of labour-power, we may drive down wages in one country, and that country will object.

Possibly we could combine our two aims by adopting a world gold standard without a fixed parity. The National Banks should be authorised to vary the parity slightly, but this too is liable to abuse. If this is impossible we would probably blunder back on to a gold standard simply because we could not keep away from it.

PROF. C. N. VAKIL (Bombay)—If the financial and commercial relations of the different countries of the world are to be peaceful, some international monetary standard will have to be devised. The World Economic Conference failed because every country seemed to be using depreciation and tariffs as points of strategy in an economic warfare. The economists of the world were absent. The government point of view was stressed and monetary theory forgotten.

Dr. THOMAS (Madras) referred to the lack of Purchasing Power among the masses of the Indian population and to a surplus of it in the hands of a few. To excite demand for goods, if necessary, by some urgent measure, (that need not be followed in normal times). Public Works of a productive nature like the reclamation of waste land, roads, bridges, and the clearing of forests should be undertaken. The difficulty is that the money injected into circulation even by a policy of controlled inflation may not reach the masses and may reach those who are not likely to spend. There is great leakage in public works. A private man can put up a house more cheaply. Yet public works are more productive in India than in countries where more has been done already.

The President (Prof. C. D. THOMPSON) in reply to Mr. Kapoor said that money can measure value only if it is itself to some extent a store of value.

With regard to Public Works as affording relief to people in times of depression, it is not necessary that all such public works should be productive as has been so commonly assumed.

With regard to the Gold Standard he remains still unconvinced by the arguments that have been advanced in favour of the gold standard. He is in favour of symmetalism, as explained in the Presidential Address.

ECONOMIC PLANNING AND ECONOMIC SURVEYS

Dr. B. V. NARAYANASWAMI NAIDU—This year the Executive Committee of the Indian Economic Association has quite appropriately chosen Economic Planning and Economic Surveys as the topic of the most immediate interest for discussion. The unexampled disturbance in the economic equilibrium of the world within the last five years has made all earnest

observers ponder seriously as to what is wrong with world economy. Highly industrialised and advanced countries have been suddenly faced with a drop in demand resulting in unemployment and paralysis of trade; while backward and less industrialised areas have suddenly found their products fallen to such a low price that production is no longer an economic proposition. Conflicting and widely divergent views are put forward as to the causes for such a state of things and equally incoherent and diverse remedies are also proposed. No country in the world has escaped the consequences of this economic crisis and this time can be best utilized to arrange matters in such a way that the disabilities of the past might be overcome and that the future might be one of ordered and peaceful advance. The exigencies of war made planning necessary in the past. The exigencies of peace make it imperative in the present. The idea of planning has been engaging the serious attention of economists, statesmen, and industrialists from Moscow to San Francisco and a large volume of literature has grown up on the subject. I shall, therefore, endeavour to offer a few thoughts on planning as far as it is applicable to India. Obviously no wise economic planning is possible without previous careful survey.

Human adjustment towards the dangers, difficulties and changes in circumstances is marked by reason; and all rational adjustment involves planning; just as planning for the individual has long been recognised as a necessity, planning for larger groups, for nations as well as for mankind, has now proved itself necessary. Starvation in the midst of plenty is a phenomenon unheard of in the past history of the world. While prices have fallen the purchasing power of the consumer has fallen still lower. Some nations felt that if commodities ceased to be reliable securities on account of a tremendous fall in prices, they could rely on gold. Others wanted to stimulate prices by manipulation of currency and by the raising of tariff walls. None of these methods met with the success that was desired since they did not take

into simultaneous account such factors as production, distribution, consumption and currency. A planned economy seeks to secure employment for all, maximum production at minimum cost and the rise in the standard of life of the largest number of the people. Concerted action by the nations of the world has long been recognised as necessary in political matters. The International Labour Office and the Council of the League of Nations testify to the desire of the world for common action; concerted international action in economic matters has become a matter of grave urgency at the present moment in view of an unprecedented scientific revolution in the means of production as well as the continuous growth of the world's population. International Planning, however, is impossible unless all the nations concerned follow sound and well-defined economic policies.

The Five-Year Plan inaugurated by the Soviet in 1928 and its success in certain directions served to focus the attention of the world on planning which the trend of events had already made absolutely necessary. As originally conceived the First Five-Year Plan was timed to end on 1st October, 1933. Then came the idea of working the "Five-Year Plan in four years," and the date of termination was fixed for 1st October, 1932, and then by a change of reckoning December 1932. It is now about a year since the first five-year plan is supposed to have been completed. The aims of the Soviet in her planning were to get the maximum economic value out of the national resources, to perfect production by coordination of its processes, to raise as high as possible the general standard of living and to satisfy as far as possible social and individual needs. In a country as yet mediaeval in its organization there is always a preponderance of demand over supply and the main object was industrialisation. This plan called GOSPLAN has a centralised administration, which distributes its duties among lesser geographical and functional organisations. In the formulation of policy the voices of labour as well as management are heard. The Five-Year Plan is not a sudden thought but is the

outcome of six or seven years of lesser planning experience. "We must strive in the shortest possible historical period to overtake and surpass the most advanced capitalistic countries and thus ensure the victory of Socialism in its historic competition with the system of Capitalism." The plan involves the co-ordination of the planning ideas of Trade Unions, Scientific Institutions, Industries, Banks, etc., and is 'cross-checked by the counter-planning method of criticism from those working under the plan.' Besides socialisation and speeding up of expansion the definite aims were to increase electric power by 331 per cent, i.e., to 22 billion kilowatt hours; heavy industries were to be increased threefold, light industries doubled, capital investments increased by 258 per cent, agricultural production increased by 55 per cent, cost of production reduced by 32 per cent and real wages raised by 52 per cent.

The latest cables show that a programme of a Second Five-Year Plan to make the Soviet Union the rival of its most powerful neighbours is published and provides that the volume of production at the end of 1937 compared with 1932 (when the first plan terminated) should increase by $2\frac{1}{2}$ times or nine times the pre-war production. Seven thousand miles of New Railways are foreshadowed, as also the doubling of the agricultural output. A thirty per cent increase in Motor Car production is planned and also an increase in the number of students. The Plan includes a large number of industrial projects such as the Dnieper river water power electric plant involving 756,000 horse power to serve 70,000 square miles with sixteen million inhabitants, the Stalingrad Tractor Plan meant to produce 50,000 tractors per year and the huge mill at Magnitogorsk capable of producing 50,000 tons of steel per year. Yet another is the Turkistan Siberian Railway. The building of model cities, chief of which is New-Stalingrad following "The policy of planned economic Geography" is also another feature of the plan. Foreign Credit and Foreign technical advice have enabled many of these projects to be completed. But

whether the mills, plants, projects and schemes will ensure Russia the production she seeks to achieve remains yet to be seen. How far the average Russian who was steeped for centuries in sloth and ignorance will be able to rise to the demands of the complex and fine instruments he has to handle time alone can show. For the present he has to pay for it by the loss of all agricultural possessions, strict rationing and denying himself many of the necessities which workers in capitalistic countries ordinarily have. Foreign countries are also getting to be more shy about investments in a country which not long ago repudiated all debts. It sounds paradoxical to say that the destroyer of capitalism depends upon capitalism for a large measure of her success.

To extend the principles of planning and control that have been developed within individual business enterprises has been recognised to be necessary in other countries too. Bismark himself felt the need for a general economic policy, and, since the war, a national Economic Council has been a part of the German Constitution. In Britain, Sir William Beveridge suggested an economic general staff. France established a National Economic Council in 1925 and the present depression and chaos have induced many plans of recovery to be discussed and canvassed in America.

Most ideas of planning, however, seem to be coloured by the experiments and experience of Russia and socialism is said to be fundamental to all planning. Prof. G. D. Cole asserts that unemployment can be eliminated and a convenient price level maintained only if the state controls industry and provides for consumption. Says he, "National Economic Planning, in any sense in which it includes the full utilization of productive resources, involves public ownership of industry and at the same time public control of the distribution of income. . . Any real economic plan, therefore, involves not merely the infusion of some socialism into the existing system, but a transformation of the fundamental basis of economic life." He rightly holds that National Economic Planning signifies agreed decisions about the

forms and quantities of goods to be produced, the amount of expansion of each industry and also what part of the country's resources should be devoted to the production of consumers' goods and what part to productive goods. But if National Economic Planning undertakes the distribution of purchasing power in all forms and the fixing of prices the task appears too great. A mathematical linking of production with purchasing power for its successful working, should have as its agent an automatic man which will breed and produce and consume solely at the bidding of the state. This involves such a great curtailment of personal liberty and such revolutionary changes in the ideas of the use and possession of wealth that the average man will not accept it as long as he can refuse to do so. But when he is faced by starvation and unemployment new avenues of recovery and prosperity must be explored even at the sacrifice of old habits. Even national economic planning cannot be immune from error and mathematical perfection and scientific accuracy may sometimes be pushed too far.

Conditions in a highly industrialised country like England afford greater justification for such views though, planning for Britain is a complicated and controversial affair. Great Britain maintains a high standard of living by exporting large quantities of finished goods to other countries and taking in return raw materials and food stuffs. If her manufactures cannot find markets abroad most of them will have to be curtailed. England's home market is only a small fraction of her foreign market and her finished goods can never find adequate demand in Britain herself. Hence it becomes necessary to think of new industries whose products will find a home market and thus help to keep up the standard of living. This rearrangement involves according to Cole, such fundamental changes that the state will have to take over the control of all production, distribution, and credit. Agriculture will be the only exception to this rule for some time to come.

Those, however, who are not doctrinaire socialists or fanatical believers in a proletarian state, may be pardoned if they believe that socialism is not an inseparable feature of economic planning. Planning attempts a rational utilization of available economic resources for the greater happiness of the greatest number, however this end is attained. A number of plans of a less drastic nature have been considered in America during the last two or three years. Public attention of the world is now taken up by the great recovery drive inaugurated by President Roosevelt and directed by General Johnson. The four main phases of this recovery drive are: (i) Reduction of interest burden on farmers by refinancing farm mortgages; (ii) the state liberally advancing funds to the farmer to enable him to get a better net income by reducing agricultural output and then by increasing the prices of farm produce while other prices continue the same; (iii) ensuring the surplus earning to the worker so as to enable him to buy home products and thereby help home industries; (iv) provision of work for the unemployed by the state undertaking projects of national utility. By these policies a new relationship has been established between farm prices and other prices, between wages and the cost of living, between producers' goods and consumers' goods.

No one can deny the urgent need for National Economic Planning in India. Planning in India need not be inspired by a crusading enthusiasm against capitalism nor by a desire to bring order out of the wreck of a highly material civilization. Genuine humanitarian feeling, sympathy with the hungry and the half-clothed masses of the poor, makes it imperative on all humane and right thinking men to banish poverty from this land and to raise the standard of living of the larger part of the country's inhabitants. India is immensely rich in her natural and human resources and yet she is one of the most indigent and least advanced of countries. Writing with a good deal of truth, Prof. Anstey, in her book, *Economic Development of India*, says, "Here is a country of ancient civilization, with rich and varied resources,

that has been in intimate contact with the most materially advanced countries of the west, but which is still essentially mediaeval in outlook and organization, and which is a byword throughout the world for the poverty of its people."

Few observers have failed to note the appalling poverty of the large mass of the people and their incredibly low standard of life. The Simon Commission Report states: "The low standard of living to which the mass of India's population attain is one of the first things that strikes a Western visitor. Wants are few, diet is simple, the climate is usually kind, the deep-rooted tradition tends to make the countrymen content with things as they are. But the depth of poverty, the pervading presence of which cannot escape notice, is not so easily realised." The same report admits that even if the most optimistic estimate is adopted the per capita average annual income in India is £8 while the corresponding figure for Great Britain is £95 and that the contrast remains startling even allowing for the difference between the range of needs to be satisfied. The Indian Banking Enquiry Committee report that the outstanding feature of Indian Rural Economy which is bound to arrest the attention of any one who enters on an investigation of the question is the appalling poverty of the rural population. Another striking feature of Indian Economic life is the extreme dependence of the people on Agriculture. The absence of other major avenues of employment has led to too many people turning to land. In 1891, 61 per cent of India's population depended on land for their living; and in 1901 the figure rose to 66 per cent; in 1921 to 73 per cent; in 1931 possibly still higher. Owing to seasonal vicissitudes and the want of proper irrigation facilities there is often a failure of crops, and the consequence is "that the average cultivator still continues to live on an insufficiency of food which reacts on his physical capacity for work and largely accounts for the high percentage of mortality in the country." It must also be noted that the yield per head and per acre in this country is very low, in spite of the high inherited skill of the Indian

Agriculturist. This is in part due to the absence of an enlightened state policy which can make available to the agriculturist the benefit of scientific researches. Owing to various causes the expenditure on agriculture by central and provincial governments is negligible though agriculture is the vital industry of India and the chief source of her revenues. Though the population of India has increased progressively the area brought under cultivation has not shown a similar increase. The extent of the average agricultural holding has been going down while agricultural indebtedness has been on the increase, the total approximate amount of agricultural debt being Rs. 900 crores. The rapid changes in the ownership of land afford an index of the distress which has forced owners to part with their most cherished possession, namely, land. Neither government nor co-operative societies have been able to advance any large measure of credit to the indebted agriculturist and the high rates of interest at which he is forced to borrow tend to increase rather than diminish his embarrassment. A system of land revenue based too much on average has left little or no margin to the cultivator to maintain his family after paying the assessment. Even the phenomenal fall in the prices of agricultural produce has not led to any serious attempt at a revision of land revenues. The wide prevalence of illiteracy has diminished the political potency and economic utility of the larger part of the people of the land. The distress from semi-starvation and under-employment has been made even more acute by the recent fall in world prices of cotton, jute, groundnut, and wheat. The neglect which has stunted education and agriculture has extended to sanitation and public health. Lack of statesmanlike planning has imparted to India some of the evils of Industrial development, though that development is as yet straggling and inadequate. The workers are paid low, charged high, and housed in slums. Little wonder then that six millions die every year in this land, while the average longevity is lowest and infant mortality comes very near the highest.

Death, ignorance, squalor, starvation and poverty have come to infest not a poor inhospitable barren rock but a country unexampled for her material and human resources. Thirty-five crores of civilised human beings,—about a fifth of the world's population,—inhabit a land which has been endowed by nature with a fertile soil, with considerable mineral wealth as well as animal creation. India is well adapted to grow whatever her children need for her sustenance. For long India has been a market for raw material for foreign nations but not because she does not possess the means of industrialisation. She has extensive deposits of coal, iron, ore, lead, zinc, and copper as well as other valuable products out of which important industries can be built. The pre-requisites of industrialisation, viz., men, money, materials, and motive power are available in plenty if only proper organizations can be established to tap them. Labour to work the factories can be found in any quantity, and there is abundance of raw materials and primary agricultural products and a large market ready at the very door of indigenous industries. Coal, at an economic price, can be had in some provinces while hydro-electric power can be cheaply obtained in others. The Cauvery falls have been harnessed in Mysore and the average power generated is about 14 million B.T. units per month. The Tata Hydro-Electric Scheme comprising the Tata Hydro-Electric Power Company and the Pykara Hydro-Electric Power Scheme will go a long way to solve the problem of cheap power. Similar schemes in the United Provinces and the Punjab are also of great potential promise. Hence all the necessities for the building up of industries in India are available and nothing further is required beyond a national economic policy on the part of the state for the achievement of the economic regeneration of the country which would make "India great and glorious alike for her own good and for the good of the world." There can be no shadow of doubt that the problem of Indian poverty can be solved by providing for her inhabitants sufficient employment outside agriculture. No doubt, agriculture will continue to be the

occupation of a large mass of her people. India can very well profit by the history of other nations to obtain for herself the benefits of industrialization without any of its evils. It will be the task of wise economic planning to avoid those mistakes which have brought bitterness between capital and labour in other countries.

The importance of such an industrial development cannot be easily overestimated. Industrial development in India will achieve a general rise in the level of the wealth and welfare of the population, will tap the capital resources at present lying unused, will relieve the country from the danger of being too greatly dependent upon agricultural pursuits which are subject to seasonal fluctuations, will absorb much of the unemployed labour of the country, and by raising the average condition of the individual, will enable the state to increase its revenue by further taxation. Lastly, opportunity will be afforded for the beneficial development of national character and the spirit of enterprise and commercial adventure will be stimulated; and ample scope for scientific work and inventions will be provided by commercial and industrial necessity. This would redound to the credit of the nation as a whole and enable her to take a higher place in the world of science, thought, and education.

The need, therefore, for planning is as urgent as in any other land. Planning in India should not be undertaken in the spirit of a race in economic armament or in any imperialistic expansion. It has become an unavoidable necessity, since India has become a mere producer of raw material and a dumping ground for cheap foreign goods; since agriculture has become the sole refuge of the people, since the problem of rescuing the masses from the grip of poverty, ignorance and disease can be solved only by the improvement of agriculture and organization of industry. Sudden and spectacular results need not be looked for; but adequate and cautious measures should be undertaken to see that India occupies her rightful place in the comity of prosperous nations.

Such planning should include within its scope the improvement of facilities for inland transport. It is not enough that the sea-port towns are connected with centres where finished goods are largely consumed or raw material for export is collected. Both food stuffs and manufactured goods produced cheaply in different parts of the country should be enabled to reach the doors of the consumers at low cost. The Banking Enquiry Committee point out that while the freight of a maund of wheat from Australia to Calcutta is six annas, the railway charge from Lyallpur to Calcutta is Rs. 1-3-3. Needless to say, any economic planning should include the development of inland transport by road, rail, or water. As a larger and larger part of the population gets absorbed in industry attempts should be made to introduce modern and mechanised methods of agriculture. Provision should be made for the establishment of an adequate number of land mortgage banks and for the introduction of scientific agricultural implements. In fact the affording of necessary credit,—long term and short term,—should form an important item of the programme of expansion. The financing and development of industries should be ensured by the establishment of a network of Industrial Banks throughout the important cities of India. In addition to providing necessary funds for industrial expansion, banks of this kind will serve as connecting links between industries and the general public by giving technical advice wherever needed. Any economic scheme for the future should ensure factory legislation of a humanitarian nature and the utilisation in urban working colonies of all the advantages the country possesses. In short geographical planning should banish dirt, squalor, and ugliness and the distinction between town and country should be reduced. In a land of villages no plan can neglect cottage industries nor the provision of cheap electric power. Proper regulation of marketing and transport of crops should also come under the purview of such a plan. A Social Insurance Scheme cannot be neglected even in a socialistic state, much less in India. Economy in the expenditure

of administration is the crying need of the hour; and a sound financial system with a stable and independent currency is the prime need of any country which seeks to progress

Any plan of economic expansion must depend for its usefulness on an accurate and extensive survey of existing economic features. Such a survey for India may be undertaken merely to secure an increased production of raw materials for alien industry, to stimulate export trade and to facilitate the import of finished goods. It may also be undertaken for a much more laudable object: to raise the standard of life of the vast mass of the people, to improve the condition of the worker, urban and rural, industrial as well as agricultural, and to develop and conserve the abundant resources of this as yet undeveloped land. Statistics on everything that illuminates the future of the people are essential for every nation that wishes to progress. Economic empiricism can best secure only a hand-to-mouth existence. No nation can take full advantage of the opportunities available to it unless it secures the assistance of detailed and up-to-date statistical analysis. Statistics not only record what has been, but also point to what may be. They form a sure guide to national policy and they are absolutely necessary for the perfection of administrative machinery and to enable it to meet new demands. Statistics keep government, economists, and the nation in general informed about important national activities. Statistics should not however be mere by-products of government activity, uninformed and unco-ordinated, serving only for public propaganda or self-advertisement of departments of government.

Though an accurate statistical survey is the necessary first step to the formulation of economic policies, in our own country statistical information relating to different aspects of economic life and of great interest to economists is not made readily available, though collected and used by some departments of government. No effort is made to tabulate and publish these though that would mean only a comparatively small expense. The present

statistical publications of government give information so late that no useful action to improve matters can be taken with their aid. Even a trained economist would find it difficult to use them because the figures often relate to different periods of time, financial years or calendar years, and only elaborate calculations can make them of any value. For the collection of much of the data government can only depend on existing agencies—district, provincial and central,—but it would be an act of statesmanship to appoint a fully qualified statistical expert who will arrange and coordinate the scattered and diversified data. This officer may be called the Director of Statistics who will every year furnish up-to-date information about the economic conditions of the country. The nature and scope of his activities, and the methods of collecting the data may be fixed with the help of a body of expert economists.

“Such a survey should, among other things, lead to the adoption of measures for increasing production and wealth; measures such as the industrialisation of agriculture, the development of industries and trade, the redistribution of population according to the fertility of the various tracts, increasing the efficiency of labour and calling in the aid of machinery, science and capital for developing the country's vast resources and organising its stupendous man power.” Such a survey should cover production, national income and national wealth, individual income, individual wealth, collective wealth, consumption, wages, cost of living, prices, and indebtedness. It should also extend to internal, foreign, and coasting trade, transport and communication, condition of crops, yield, crop experiments, and value of produce. A double classification of the population based first, on occupation, and second, on income, should be effected. Intensive studies of classes, communities, or families should be systematic and representative and extending through the revenue year. The wages and price statistics may be collected by the industries, mining, agriculture, and revenue departments, necessary legal power being obtained to ensure and facilitate their collection. Intensive en-

quiries in typical areas, typical crops, and typical industries may also be undertaken. The Imperial Council of Agricultural Research can be of great help in this matter not only by coordinating information but also by framing the general plan on which the agricultural statistics should be collected and preparing and encouraging schemes for intensive enquiries relating to agricultural life. A statistical bureau in each province is also highly necessary—a bureau which will tabulate and publish provincial data collected by other departments or private agencies. Economic Associations and University Departments should also be impressed into the service of this provincial department. It is gratifying to note that Boards of Economic Survey have already been constituted in some provinces and we shall listen with interest to the members of the Indian Economic Survey who are with us. I am sure they will tell us how best to carry out the intended survey, so that it will lead to a great revival of national prosperity in our country.

As I have already pointed out an economic survey is only the essential first step to far-sighted economic planning and expansion. Such a survey cannot be finished in a day. In fact, opinion is unanimous that there should be a permanent bureau of economic statistics. But even this would lead nowhere unless there is a permanent economic council—a small body of economists for expert advice in the formulation of economic policy. This council should be in close touch with the Director of Statistics and with the provincial economic departments. The members should also have facilities to keep themselves in touch with similar bodies in other countries and with economic movements of other countries as well as with the League of Nations. This body will serve as an economic general staff for the country. The members of the liberal Industrial Enquiry advocated for England a similar general staff combining in their functions the task of statistical collection as well as advice to government. They also suggested a standing committee of the cabinet, called the committee of economic policy to which the chief of the general staff should act as secretary. Every

nation needs such organizations for handling and foreseeing the complex economic problems of modern administration.

PROF. VAKIL presented the scheme prepared by the Committee of the Indian Economic Association for the proposed economic survey and allied questions, which was prepared in pursuance of the suggestion of Sir George Schuster at the Delhi Conference of the Association the previous year. The report of this committee was published in the Indian Economic Journal for April, 1933.

In India we have had plenty of Rural Economic Surveys, but no such surveys have been undertaken so far in urban areas though certain special problems of cities and towns have been investigated, e.g., the conditions of life of the Bombay Cotton Mill Operatives. There are great difficulties to be overcome in the matter of making an intensive study of special economic problems, e.g., railway rates. In Bombay a survey of 100 villages was carried out, but could not be published. Financial assistance must be given to universities for publication of research and for research scholarships. Government can give aid in getting much departmental information. Thus the G. I. P. Railway refused to give access to its old freight books.

PROF. D. N. BANERJEE—Economic Planning should also be accompanied by Political Planning. Business and speculation go on based on false information. Nothing was done with the recommendations of the Economic Enquiry Committee.

PROF. L. C. JAIN (Punjab) dealt in detail with the scope and method of Economic Survey. The time of the depression is the time when an Economic Survey may be undertaken at a cheap cost. It will be false economy to shelve the urgent Problem of Economic Survey on the pretext of expenditure since the Economic Survey is the first step to the Economic Progress of any country. Even a partial survey is better than none. The method of sampling in the collection of statistics is full of possibilities. Care should be taken in the collection of statistics for quality is a great deal more important than quantity. Teachers and officers of the

Agricultural, Health, Meteorological, Income, and Revenue Departments can help. Surveys can be had by the offer of prices.

MR. S. V. AYYAR of Dacca—Statistical data are of no use without a plan. I would prefer a Russian plan rather than no plan at all. Develop the buying power of the villages. By insisting on too much accuracy, nothing is done. In five years data is obsolete. Enquiries into conditions must be correlated with definite action.

PROF. K. B. MADHAVA of Mysore said that courses in statistics are essential. The trained statistician can interpolate for calendar or financial years. He can tell the limits of accuracy of figures. Mysore is giving a complete degree in statistics with Mathematics and Economics. The Indian States are ready to co-operate with the Government of India and the Provinces.

PROF. KALE—Division of areas into tracts for collection of statistics would be conducive to accuracy. Thus there are famine tracts, dry tracts, sugar tracts, etc. Some uniform standard of inquiry is indispensable. Our object would be defeated if we exclude Indian states since the lives of all Indians are intertwined. We need co-ordination between the Government of India, the States, the Provinces, the Departments, and between different men in the same department. Help should be given to inquiries of committees by all the local administrations in India. The statistics of Inter-Provincial Trade could easily be published again, as was done formerly. These were very valuable, and could easily be collected.

PROF. H. GHOSH of Calcutta explained how the statistics of crops and yield and the vital statistics would be improved with little expense. He also asked for statistics of agricultural prices.

He described the working of the Economic Council in Bengal, which has twenty members, including representatives of the two universities, the chambers of commerce, and all other interests. They had Rs. 15,000 to spend on research.

MR. V. T. ARAS (M.L.C., Madras) said that agricultural prices are already published weekly in every district in Madras. We

have enough statistics, but they should be co-ordinated by the mathematics and economics departments of the universities.

PROF. KAMDAR of Baroda—The Development Board of Baroda State, including the Professors of Economics, Chemistry and Physics, and the Registrar of Co-operative Societies, does much for the economic development of the State. It is divided into various committees of which the publicity committee is one. It collects and publishes statistics regarding economic conditions of villages which are useful. This is worth the consideration of the authorities in other parts of India.

THE PRESIDENT, PROF. C. D. THOMPSON agreed with the statements so far made as to the importance of statistics in economics. The statistics collected should not be the monopoly of a few persons in power. They should be published for the benefit of all. He suggested that Government representatives and Economists should exchange views and try to coordinate the statistical data available and devise ways of collecting more accurate statistics. He endorsed the views of Prof. Kale on the matter of Economic Survey. He also suggested a method of checking statistics of production against those of consumption, and of testing incomes by inquiries into mobility of labour, and into the markets for the products of labour.

DISCUSSION ON ECONOMIC CONDITIONS IN INDIA AT THE ADVENT OF BRITISH RULE

PROF. SRINIVASACHARYA spoke of the methods used in compelling the payment of taxes a hundred years ago.

PROF. MADHAVA said that people hoard even in a depression. 14 crores were sent out, but at the same time 6 crores were imported during the years following 1830.

The President, PROF. C. D. THOMPSON, said that these papers had strengthened his belief in cycles. It was remarkable that just about one hundred years ago there had been depressions in both Madras and Bombay similar to the present depression. We find the same fall in prices, the same difficulty in paying debts and taxes; in those days silver was exported, now it is gold; in those days foreign clothes and objects of art were imported, now it is more likely to be a foreign motor-car. To-day also the octroi duties and even the terminal taxes hinder the regional development of trade between a city and the surrounding rural area. The collection of information from the records of old families, as explained by Prof. Kale, is of the utmost importance to every student of economics or statistics. An old family of the United Provinces had records for over one hundred years of the prices, wages, rates of interest, rates of insurance for boats on the Ganges, and even the expenditures of the family!

The President thanked the Vice-Chancellor and the University of Annamalai for all their kindness and the trouble they had taken in entertaining the conference, especially after the disastrous cyclone. Their kindness and generosity would always be gratefully remembered.

INDIAN ECONOMIC ASSOCIATION

SEVENTEENTH CONFERENCE, ANNAMALAI UNIVERSITY,

JANUARY 1934

The Minutes of the Annual General Meeting held at the Annamalai University, Chidambaram, on Friday, 5th January, 1934, at 10-30 a.m.

Present:

Prof. C. D. Thompson, *President*.

Prof. V. G. Kale

Prof. C. N. Vakil

Dr. B. V. Narayanaswami Naidu

Prof. K. B. Madhava

Dr. L. C. Jain

Prof. K. H. Kamdar

Miss L. M. Ouwerkerk

Dr. H. Ghosh

Prof. U. S. Bhatnagar

Prof. D. N. Banerjee

Prof. S. A. Hussain

Prof. S. V. Ayyar

Prof. Jafer Hasan

Mr. C. W. B. Zacharias

Mr. M. A. Muniswami

Mr. S. Subramanian

Mr. C. D. Nayagam

1. The minutes of the last Annual General Meeting held at Delhi were confirmed.

2. The President referred to the sad death of Prof. R. M. Joshi, who was for many years an active member of the Association and worked as its Secretary and Treasurer. The following resolution was then passed by the meeting:

“That this meeting places on record the great loss that the

Association has suffered by the untimely death of one of its most active and devoted members, Prof. R. M. Joshi, and resolves to convey its sincere condolence to the family of the deceased."

3. The Report of the Hon. Secretary and Treasurer and the audited Statement of Accounts for the year ending 31st May, 1933 were considered and approved.

4. The invitation of the University of Patna for holding the Eighteenth Conference under their auspices was accepted with thanks. It was resolved that the Conference should be held during the Christmas Week of 1934.

5. The following subjects were selected for discussion at the next Conference :—

(a) Economic Planning for India.

(b) The Indian Census, 1931.

(c) Theory of International Trade.

(d) Economic History of India in the first half of the last century.

(e) A current topic to be decided by the Executive Committee.

6. In connection with Mr. D. N. Banerjee's letter *re*: introduction of political science as a subject for discussion, it was resolved that the Executive Committee should explore the ways and means for holding a Social Science Conference including Economics, Sociology, Political Science, History and Statistics, and report on the same to the General Body at its next meeting.

7. The following office-bearers were unanimously elected for the ensuing year :

President : Professor C. N. Vakil.

Hon. Secretary and Treasurer : Dr. L. C. Jain.

Hon. Local Secretary : Dr. Gyan Chand.

Members of the Executive Committee:

- | | |
|-----------------------------|--------------------------|
| 1. Prof. V. G. Kale. | 7. Prof. H. L. Chablaui. |
| 2. Prof. C. D. Thompson. | 8. Prof. V. L. D'Souza. |
| 3. Dr. P. Banerjee. | 9. Dr. D. L. Dubey. |
| 4. Dr. Radhakamal Mukerjee. | 10. Dr. B. N. Kaul. |
| 5. Prof. P. J. Thomas. | 11. Mr. S. V. Ayyar. |
| 6. Dr. B. V. Narayanaswami | 12. Mr. Jafar Hasan. |
- Naidu.

8. (a) It was resolved that the Hon. Auditor, Mr. Arjun K. S. Aiyar, be thanked for his kindness in auditing the accounts for the year 1932-33.

(b) Mr. Sodhbans was appointed Hon. Auditor for the year 1933-34.

9. The following gentlemen were elected to represent the Association on the Editorial Board of the Journal:—

- | | |
|------------------------|--------------------------|
| 1. Prof. V. G. Kale. | 3. Dr. R. K. Mukerjee. |
| 2. Prof. P. J. Thomas. | 4. Prof. D. N. Banerjee. |

10. In connection with the renewal of the Agreement for the Journal with the University of Allahabad, it was resolved—

(a) That the present Agreement with the Department of Economics, Allahabad, be continued for 1934-35, half the profits of the Journal being credited to the Association.

(b) That the Executive Committee be authorised to enter into an Agreement with the University of Allahabad on the following lines:—

(i) That the Journal shall be owned and controlled jointly by the Association and the University of Allahabad;

(ii) That the share of the Association in the existing Reserve Fund of the Journal be transferred to the Association;

(iii) That the profits of the Journal shall be equally divided between the Association and the University of Allahabad every year;

(iv) That the Association shall pay a minimum contribution of Rs. 1,125 per year or Rs. 9 per member for 125 members, but that for every member in excess of 125, the Association shall pay Rs. 8 per member.

11. The report of the Committee on Economic Survey was recorded with thanks.

12. Prof. Chablani's letter *re*: recognition of and consultation with the Association by Government in matters relating to Economic Enquiries was recorded on the understanding that the President and the Secretary would take unofficial steps in the matter.

13. The report of the Committee on the formation of a Population Committee was recorded, and it was resolved that the Association should co-operate with any body that may be interested in the study of Population Problems.

14. It was resolved that the President of the year and the retiring ex-President should form a Standing Committee for scrutinising the Papers to be admitted for discussion at a Conference and for publication in the Conference Number and allied matters. In case one of the members were unable to act, he should nominate one of the former Presidents to act in his place.

15. The offer of Dr. B. N. Narayanaswami Naidu, the Hon. Local Secretary to contribute a sum of Rs. 150 on behalf of the Reception Committee to the cost of publishing the Conference Number was accepted with thanks.

16. It was resolved that the Secretary should collect information *re*: research work in Economics done or in progress in different Indian Universities and arrange for the publication of the same in the Journal.

The meeting closed with a vote of thanks to the Hon. Raja Sir Annamalai Chettiar, to the Vice-Chancellor of the Annamalai University, and to the President and other office-bearers of the Association for the year 1933.

(Sd.) C. D. THOMPSON,

President

(Sd.) C. N. VAKIL,

Secretary and Treasurer.

INDIAN ECONOMIC ASSOCIATION

The Report for the year ending 31st May, 1933

The membership of the Association showed a slight improvement; the number of members, on 1st June, 1932, was 142; on 31st May, 1933, it was 149.

The financial position of the Association showed improvement. From Rs. 1,352 on 1st June, 1932, the balance increased to Rs. 2,171 on 31st May, 1933. This was chiefly due to the receipt of a sum of Rs. 529 by the Association in July 1932, from the organisers of the Fifteenth Indian Economic Conference held at Bombay in January, 1932. The large item of expenditure due to the extra pages, exceeding 200, in the Conference number of the Journal, which has caused difficulties in recent years continued, but there was a relief due to a resolution of the last Annual General Meeting, according to which half the profits of the Journal during the years 1932-33 and 1933-34, are to be equally divided between the Association and the Department of Economics, University of Allahabad.

The Committee appointed by the Association at Delhi in connection with the proposed Economic Survey, met in Delhi in March and drew up a scheme, which was forwarded to Government, and which was also published in the Journal.

In view of my absence from India during April to September, Professor S. K. Muranjan was appointed by the Executive Committee to act as Secretary and Treasurer.

The audited statement of receipts and payments is attached herewith.

C. N. VAKIL,

Hon. Secretary and Treasurer.

School of Economics and Sociology,

University of Bombay.

Bombay, 20th December, 1933.

INDIAN ECONOMIC ASSOCIATION
Receipts and Payments Account, 1932-33
(From 1st June 1932 to 31st May, 1933)

RECEIPTS		PAYMENTS	
	Rs. a. p.		Rs. a. p.
Balance from last year	... .. 1,352 5 5	Paid to the Department of Economics, University of Allahabad for 149 at Rs. 9 each including one life member	1,341 0 0
Subscription from 148 members at Rs. 12...	1,776 0 0	Expenditure for 18 V P. P. refused	5 10 0
Proceeds of 15th Indian Economic Conference	529 14 0	Printing and Stationery	50 12 0
Share of Profits from the Journal	254 2 3	Postage	32 15 6
Advance subscription and arrears received	18 0 0	Paid towards clerical assistance	75 0 0
Interest on fixed deposit and current account	67 3 0	Paid to Managing Editor, Indian Journal of Economics for Conference Number ...	327 15 3
Miscellaneous receipts	11 15 0	Miscellaneous expenses	4 8 0
		Rs a. p.	
		Bank Balance:—	
		Fixed Deposit	1,047 7 0
		Current Account	1,124 3 11
			2 171 10 11
Total	4,009 7 8	Total	4,009 7 8

Examined and found correct

ARJUN K. S. AIYAR.

Incorporated Accountant.

Bombay, 1st December, 1933.

Hon. Auditor.

C. N. VAKIL.

Hon. Secretary and Treasurer.

IN MEMORIAM

Professor H. L. Chablani.

By the death of Professor H. L. Chablani, the Indian Economic Association has lost one of its active members. The members of the Association knew Prof. Chablani by his writings as well as by his public work, but they came in personal contact with him in the last few Conferences to which he contributed important papers and discussions. The success of the Delhi Conference held in January 1933, was chiefly due to the organising capacity and local influence of Prof. Chablani, who, as the Hon. Local Secretary, succeeded in making arrangements by which the work of the Conference was effectively felt in important quarters. Prof. Chablani worked also as a member of the Editorial Board of this Journal for some years and was an important contributor to its pages.

Prof. Chablani devoted his life to teaching Economics and allied subjects. He began his teaching career in 1911, and among the institutions which he served, the following may be mentioned: B. B. College, Muzaffarpore; D.A.-V. College, Lahore; Jaswant College, Jodhpur; Benares Hindu University; Elphinstone College, Bombay; Sind National College, Hyderabad and the Delhi University. His connection with the Benares University as the Head of the Department of Economics during 1917—22, and with the University of Delhi as the Head of the Department of Economics since 1924, enabled him to contribute most as a Teacher of Economics.

Prof. Chablani was well-known as the author of several works on History and Economics. His two books on *Currency and Banking* are widely known. As a member of the Banking Enquiry Committee for the Centrally Administered Areas, he did very useful work. His contribution on Federal Finance submitted to the Delhi Conference was acknowledged to be a useful and searching

analysis of the proposals made by the Federal Finance Committee and was the subject-matter of a very instructive discussion.

It is remarkable that in addition to his pre-occupation as a teacher and writer, Prof. Chablani found time to do important work in other fields. His work in connection with the starting of the New High School and the Model High School at Karachi, and in connection with the starting of the Sind National College at Hyderabad, is not known to the outside public. Though in his professional career he was not connected with Sind except for a short period, he was well known as the most important leader of thought in connection with the vexed question of the separation of Sind from the Bombay Presidency. This question has agitated the minds of the public for many years and has formed the basis of enquiries, both by the Indian National Congress and by the Government of India. It was chiefly on account of the financial implications involved in the proposed separation that Prof. Chablani was against it. He wrote and spoke in public as well as spared no efforts to impress upon leading people his ideas on the subject in private; his study of the problem was both thorough and convincing, and the problem was so much to his heart that almost to the last minute of his existence, he was seriously thinking about it. Prof. Chablani was a member of the Committee appointed by the Indian National Congress with Sir Purshottamdas Thakurdas as Chairman, to inquire into the financial aspects of the Separation of Sind. Later, he represented the Hindus of Sind at the All-Parties Conference at Lucknow. He was the acknowledged leader of opinion on this problem in connection with the enquiries instituted by the Government. Either before the Simon Commission or before the Miles-Irving Committee, it was to Prof. Chablani that the people had to turn to help their cause. The Brayne Committee, which was appointed more recently, included Prof. Chablani. During the sittings of the Joint Parliamentary Committee on the White Paper Scheme, Prof. Chablani was invited by the Secretary of State for India to give evidence on behalf of the Sind Hindus.

While in London for this purpose, Prof. Chablani was in indifferent health, but in spite of it, even after his return he continued to overwork himself for his professional work as well as for the public duties undertaken by him. His last piece of work was a Memorandum on the Administrative Aspects of the Separation of Sind to be submitted to the Committee now working.

It was indeed a tragic event that a man of such unusual energy should have passed away at a comparatively early age. We are quite sure that the memory of Prof. Chablani will be cherished for long by the students whom he inspired to think and work, by his colleagues who admired his capacity and respected his views, even when they differed from him, and by the public of Sind for his untiring advocacy of their economic claims.

—C. N. VAKIL.

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THE TREND OF INDIAN BIRTH RATES IN THE PERSPECTIVE OF COMPARATIVE DEMOGRAPHY

BY

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I. Population Law and Population Policy.

(a) *Combating Depopulation and Promoting "Large Families."*—It is only during the last decade or so that the attention of scholars has been seriously directed to the Indian population questions. And this happens to be a period in which the science of population is being reconstructed on new foundations. In the first place, the policy of restriction or control is being profoundly challenged by the policy of expansion. The fear of overpopulation is being replaced by the fear of depopulation.¹ And in the second place, two new categories have been

¹ The ideological antithesis may be encountered, for instance, in East: *Mankind at the Cross-Roads* (New York 1925) *vis a vis* Zahn: *Wie die Familie, so das Volk* (Munich 1930), and Boverat: *L'Encouragement national dux familles nombreuses* and Vieuille: *Primes a la natalite* in *Huitieme Congres National de la Natalite*. September, 1926 (Paris) pp. 61, 83, and Gini's paper in *Lo Stato Mussoliniano*, a survey of Fascist achievements and projects along diverse fronts including population, published as a special number of the monthly *Rassegna Italiana* (Rome 1930).

serving to enrich this science with novel modes of thinking. First, we have the socio-economic doctrine of optimum which is but an integral part of the overpopulation—depopulation complex. Then there is the biological concept underlying, as it does, the logistic curve in the growth of human numbers.²

Fundamentally, of course, today as in the past the doctrine of population has two chief problems to solve. The question of the law or the rate at which human beings multiply is naturally of supreme importance. The other question is that bearing on the proper economic policy for a group, region or the world.

But there are some inherent difficulties which render the study of Indian population under the same conditions as those of certain countries of Europe utterly impossible. First, there are great discrepancies³ between the census returns and the returns of the Public Health Departments. The value of the absolute figures in Indian demographic statistics is therefore very limited. Secondly, intensive studies of the type consecrated to certain European countries, e.g., those of Kuczyinsky, Dublin, Lotka, Gini, Burgdoerfer, etc. bearing on age-groups, differential fertility, marriage-curves etc. remain to be undertaken in the field of Indian demography. There are as yet no reports available on the correlations of occupation,⁴ religion, caste or race with births, deaths and growths for a fairly large number of cases such as can be examined for the purposes of comparison within the Indian area.

² Boden Heimer: "Thesen fuer eine menschliche Bevoelkerungs lehrre auf biologischer Grundlage" in the *Zeitschrift fuer Geopolitik* (Berlin), August 1932.

³ *Census of India 1921 Vol. I India Part I. Report.* (Calcutta 1924), pp. 14-18; *Census of India 1931, Vol. V. Bengal and Sikkim. Part I. Report* (Calcutta 1933), pp. 9, 126-127.

⁴ See the Appendix on an enquiry into the fertility of marriages in *Census of India 1931 Vol. V. Bengal and Sikkim Part I Report* (1933 Calcutta), pp. 161-167. This is study of 2406 cases from Bengal. Some documents of the "new" science of population are the following: Dublin and Lotka: "On the True Rate of Natural Increase" (*Journal of the American Statistical Association*, September, 1925); Kuczynski: *The Balance of Births and Deaths* (New York 1928); Gini: *Population* (Chicago 1930); Burgdoerfer: *Volk ohne Jugend* (Berlin 1932).

It is with such handicaps that the students of Indian demography have to move about in the field of international vital statistics. The question of checking the alleged laws of population growth based as they are, on the data of other countries becomes naturally as complicated as that of explaining the Indian demographic data themselves in the perspective of the other countries. All the same, some of the statistics, such as can be furnished from the Indian subcontinent, are varied and extensive enough to enable the economist and the sociologist to contribute in a substantial manner to the re-construction of population science such as has been going on for some time in Eur-America.

While the highest watermark of Neo-Malthusianism⁵ was reached in the World Population Conference held at Geneva in 1927, which was seeking among other things to awaken mankind's interest in the necessity of birth control, the other side of the shield was exhibited simultaneously and in a powerful manner by the publication of Korherr's essay on *Geburtenrueckgang* (Decline of Births) in the *Sueddeutsche Monatshefte* of Munich. This paper really marks an important landmark in the contemporary theory of population policy. Korherr established the thesis that the diminution of births spelt the death of peoples. Thereby he initiated a campaign for combating, first, the birth control movements, and secondly, the doctrine of the happiness of the few. The propaganda was directed no less against urbanism and "metropolism."

Korherr's words did not fall on mere academicians. The next year he found an energetic admirer in Mussolini⁶ who took up the young German scholar's ideas for his article entitled *Il Numero come forza* (Number as Force), published in the monthly *Gerarchia* of Milan. The Fascist *duce* came out with his doctrine of

⁵ *Population et Repopulation* (Paris 1929), pp. 20-27, 41-44

⁶ Zingali: *I Provvedimenti Mussoliniani per lo Sviluppo quantitativo e qualitativo della Popolazione* (Mussolini's Measures for the quantitative and qualitative development of the population); a paper for the Congress, *Internazionale per gli studi sulla popolazione*, Rome 1931; *Das bevölkerungs politische Programm Mussolini in the Zeitschrift fuer Geopolitik* (Berlin), February, 1933.

maximum births and minimum deaths. The Malthusian law was considered by him to be pseudo-scientific. He argued that the standard of living has increased in spite of the increase of population. For his *patria* he wanted ten million more Italians in order that the weight of the Italian people might make itself felt in the history of the world. Since then *famiglie numerose* (large families) i.e. families with seven or more children, have been the subject of vigorous and intensive research among Italian biologists, anthropologists and sociologists under the chairmanship of Prof. Corrado Gini,⁷ with special reference to the anatomical, physiological and other characteristics of parents. And these researches constituted a chief feature of the deliberations at the International Congress for the Study of Population held at Rome in September 1931.

Some of these recent Italian researches on "large families" bear the following titles:

Chigi: *Costituzione e Fertilità* (Constitution and Fertility).

Aggazzotti: *Relazione sull'inchiesta antropometrica e costituzionalistica sui genitori che hanno avuto almeno 7 figli, nella Provincia di Modena* (Report on the anthropometrical and constitutional enquiry concerning the parents having at least seven children in the Province of Modena).

Elena Caroli-Saponaro: *Tenore di vita e psicologia delle famiglie numerose del Barese* (the standard of Life and Psychology of Large-sized Families in the city of Bari).

Tirelli: *Risultati dell'indagine antropologica e costituzionalistica sui genitori delle famiglie numerose di un Comune del Lazio* (Results of an anthropological and constitutional investigation concerning the parents of large families in a commune of Lazio).

⁷ Gini, Zingali and others: *Demografia* (Turin 1930), an encyclopaedic study on population questions (health statistics, anthropometry, demographic trends, growth-rates etc.; also Gini: *Population* (Chicago 1930).

Marassini: *Osservazioni dei tipi morfologici dei genitori di famiglie numerose* (Observations on the morphological types of the parents of large families).

Cuscuna: *Ricerche sulla costituzione dei prolifici* (Researches on the Constitution of the Prolific).

Frassetto: *I principali caratteri antropologici e costituzionalistici studiati in 1450 genitori prolifici della Regione Emiliana* (The principal anthropological and constitutional characteristics studied among 1450 prolific parents of Emilia).

To this may be added a paper like the one by Pietrà and Ferrari entitled *Il Costo monetario dell'uomo* (The Monetary cost of an Individual). It is an objective study on how much it costs an individual to maintain himself but throws light on the economic and financial aspects of large families which it is the policy of Mussolini to promote.

The problem of combating the decline in births has for some time, specially since the end of the Great War, been a question of practical politics in France also. The *Conseil Supérieur de la natalité* (Higher Committee on the Birth-Rate) is a scientific association with a definite practical aim, namely, the raising of the birth-rate. The eleventh national congress on the birth rate which was held at Rennes in September 1929 discussed in this connection the problems of cheap houses, *la famille nombreuse* (the large-sized family) as influenced by the Loucheur Act (which authorized the State to grant aid to building societies), social assurance, family allowance and other topics calculated to encourage married life and births.

This congress⁸ was patronized by some 70 chambers of commerce, 13 philanthropic and social associations, and 7 commercial societies. Besides, 63 associations, federations or leagues interested in "large family" naturally supported the congress as "adherents." It is worth while to observe that the

⁸ *Onzième Congrès National de la Natalité*. Rennes 27-29 September, 1929 (Comité Permanent de la Natalité, Paris), pp 33, 133-142.

general assembly of the national federation of the “*associations de familles nombreuses*” comprises 131 regional (provincial), district federations, and local leagues. The organization is composed of 1200 local institutions representing as they do several hundred thousand families. Of these associations 29 have their own publicity organs. The national federation has the central courier. The propaganda comprises a total publication of 100,000 copies.

“International birth strike” is the common target of all these population congresses and discussions. It is not so much over-population as depopulation, not so much poverty or the lowering of the standard as the weakening in numbers, that is being feared in the world today.⁹

Depopulation¹⁰ is indeed at least as important a category in contemporary population economics and economic policy as over-population. This fact alone is an index to the tremendous transformation that has taken place in social science and politics since the nightmare of overpopulation attacked the brain of mankind under Malthus's lead (1798) or rather since Neo-Malthusianism became a practical creed of socio-economic statesmanship about 1877—80.

(b) *Malthus and the Malthusians*.—It was in the Malthusian atmosphere that Ricardo enunciated his theories of rent and wages in the *Principles of Political Economy and Taxation* (1817). And not only did Senior in 1830 accept Malthus as his *guru* while establishing the wage-fund theory but the Poor Law of 1834 obtained its spiritual cue from him in regard to the hatred of state intervention in questions of destitution. Last but not least, Malthusianism furnished the basic idea in the last word of classical economics, namely, John Stuart Mill's *Principles of Political*

⁹ Burgdoerfer: *Volk ohne Jugend* (Berlin 1932); Dublin and Lotka: *The Average Size of the Family in a Stationary and a Diminishing Population*, and Konrad: *Die Kinderreiche Familie in Deutschland* papers for the Congresso Internazionale per gli studi sulla Popolazione, Rome, 1931.

¹⁰ Boverat: *L' Avenir de la Population Europeenne: Surpopulation ou Depopulation*, a paper for the Congresso Internazionale, Rome, 1931.

Economy (1848), when he started advocating the "stationary state" in population and was prepared to espouse not only "moral restraint" but champion "legal" restraint also in order to control the numbers of population. With such tremendous backing birth control could not but be the first postulate of applied sociology in field of population by the middle of the nineteenth century. The British tradition was maintained until our own days by Marshall in his *Principles* which feared overpopulation as well as advocated checks with a view to keeping the standard of comforts intact.

French thought¹¹ was not less Malthusianized than British. In 1836 Pellegrino Rossi, an Italian naturalized in France, published his *Introduction pour l'Essai de Malthus*. This was followed in 1857 by Garnier's *Traité du principe de population* which served but to popularize the same teachings. In Italy as early as 1816 the "moral restriction" of Malthus was advocated by Bosellini in *Nuove esame delle sorgenti della privata e pubblica ricchezza* (New Surveys of the Sources of Private and Public Wealth). By 1863 the ideas found a convenient place in a standard text book of the day, namely, Boccardo's *Trattato teorico di economia politica* (Theoretical Treatise on Political Economy).

In Roscher's¹² *Grundlagen der Nationaloekonomie* (Foundations of Political Economy) 1854, and other texts of the earlier "historical school" in Germany Malthusianism was likewise an accepted postulate. Schmoller's *Grundriss der allgemeinen Volkswirtschaftslehre* (Sketch of General Economics), also, as the embodiment of later historical school (1900—04) considers Malthus's scientific analysis to be remarkable although the author rejects the geometrical progression as untrue to the facts of population history.

The fear of overpopulation pervaded Ruemelin's article on population in Schoenberg's *Handbuch*. According to him Germany

¹¹ Gonnard : *Histoire des doctrines de la population* (Paris 1923) pp. 300-309.

¹² Elster : *Bevoelkerungslehre und Bevoelkerungspolitik in Handwoerterbuch der Staatswissenschaften*, Vol. II (Jena 1924) pp. 788-89, 790-791.

was already overpopulated about 1870. Adolf Wagner, although socialistic, also believed in the possibility of overpopulation and recommended in his *Lehrbuch der politischen Oekonomie* (1879) that the state should control the numbers. He thus went beyond Malthus who considered moral restraint to be the only remedy and would by all means oppose state intervention as socialistic. Restrictive legislation was recommended by the socialist leader, Kautsky, in his *Vermehrung und Entwicklung in Natur und Gesellschaft* (Increase and Development in Nature and Society), 1910. Under socialism, as he believed, agriculture would indeed become more productive but overpopulation was still a possibility. Kautsky thus met Marshall by another route.

No matter however great the modifications to which the doctrines of Malthus were subjected mankind should appear to have accepted him as a world-teacher of profound value. The limitation of births was the fundamental gospel in all schemes of national welfare and *Socialpolitik*.

(c) *Anti-Malthus*.—And yet the German-Italian-French¹³ ideas or practices of today cannot by any means be regarded as the first or sudden signs of revolt against the Malthusian Bastille. The anti-Malthusian tradition is at least as old and as powerful as Malthus himself.

It is well known that Malthus's *Essay* was born as a propaganda brochure against the socialism of such radical thinkers as Godwin, who in *Political Justice* (1793) and the *Enquirer* (1797) sought to preach that human misery was due not to the alleged defects of individuals but exclusively to the defects of political institutions. If Malthus was by conviction anti-socialist, all socialists have by nature been anti-Malthus, although there have been some exceptions as in the cases of Wagner and Kautsky. Besides, Anti-Malthus is to be found in other camps as well.

¹³ Gonnard : *Histoire des Doctrines de la Population* (Paris, 1928) pp 312-17 ; Borkiewicz : *Bevoelkerungslehre* (Leipzig 1918), pp. 81-83 ; Mlster : *Bevoelkerungslehre und Bevoelkerungspolitik in Handwoerterbuch der Staatswissenschaften* Vol. II (Jena 1924) pp 773-87, 794-803.

A most important document of anti-Malthusian British thought is to be found in Doubleday's *True Law of Population* (1841). This thinker came to the conclusion that well-fed people tended to diminish and ill-fed to increase. The law was just the opposite to what Malthus had taught.

But by far the most influential and effective Anti-Malthus was Spencer whose *Population Theory* (1832) and *Principles of Biology* (1867) served to popularize among the students of science and philosophy in all domains that the tendency of mankind was not towards unlimited increase but towards decline. To use his categories, civilization tended to "individuation" and this latter to control. The "stationary state" was gradually established by civilization. Hence there was no population problem at all.

In French socialist economics the population problem did not exist. Fourier taught in *Nouveau Monde Industriel et Sociétaire* (The New Industrial and Social World), 1840, that it was not because of dearth of food but because of other circumstances that population naturally tended to diminish. According to Proudhon (*Contradictions Economiques*, 1846) it is industrialism that restricts population. The anti-socialist Leroy-Beaulieu taught in his *Precis d'Economie Politique* (1888) that Malthus was but relative to his own epoch and possessed no universal validity. In his judgment *la civilisation détruit considérablement la natalité*. According to him Malthus failed to take cognisance of *l'égoïsme des hommes*. It is human egoism that works against population. The greater the democracy (and the greater the individualism), the greater the diminution of births. Leroy-Beaulieu is to be regarded as one of the first who sought to popularize the fear of depopulation. The doctrine of *capillarité sociale* (social capillarity) was developed by the French economist Dumont in *Depopulation et Civilisation* (1890). His foundation was Spencerian. The *volonté génératrice* (reproductive will) diminishes with the progress of civilization, says he. The developments of the race is therefore antagonistic to that of the individual. According to Gonnard the law of population is not simply physiological, psychological or

economic but sociological. The statement of the law would vary according to the social milieu. It therefore depends on what is called civilization. According to Gonnard Malthus has only shown that everywhere the population is destroyed by such and such causes but has not been able to prove that it tends to go beyond the subsistence.

Anti-Malthusianism has been strong in Italy also. In *Elementi di Economia Sociale* (1843) De Augustinus preached that over-population could be combated by better social organization. Malthus was condemned wholesale by the Romagnosi in *Sulla Crescente Popolazione* (On Increasing Population), 1845. Loria's population economics was Marxist in its framework.

Carey, the American economist, believed that fecundity was diminishing and that productivity might increase (*The Unity of Law*). According to his *Principles of Social Science* (1859) the numbers regulated themselves sufficiently in every well-governed society and it is the lower and not the higher states of civilization that are characterized by the pressure of population on subsistence.

In Henry George's *Progress and Poverty* (1880) Malthus is likewise refuted in so far as poverty is considered to be as not due to overpopulation. As the result of statistical studies the American economist Fetter was in a position to announce in 1894 that the wealthier the people, the less the fertility.

The lower or decreasing fertility of marriages was subject of statistical investigations by the Swedish economist Tallquist. His work published in 1886 in French announced the conclusion that the more cultured the people the less fertile they were.

Anti-Malthus is to be found in plenty in German economics.¹⁴ According to Frederick List the possibilities of food production were unlimited. He was convinced, besides, that the agricultural-manufacturing state could maintain more population than the exclusively agricultural state. This "optimism" has been shared by many thinkers (Bastiat, Carey, Oppenheimer).

¹⁴ Elster: "Bevoelkerungslehre und Bevoelkerungspolitik" in *Handwoerterbuch der Staatswissenschaften* Vol. II, (Jena 1924), pp. 775-777, 784, 794-95.

Karl Marx believed that every epoch had its own law of population and that Malthus's generalizations were too wide. The anti-Marxist Schaeffle likewise was convinced that there was no general or permanent law. And in our own times Franz Oppenheimer, the socialist, in his *Das Bevölkerungs-gesetz des T. R. Malthus* (1901) has formulated the doctrine that under a normal economic system (socialist) subsistence would increase faster than population because of improvements in technique. Mombert announced in *Studien zur Bevölkerungsbewegung in Deutschland* (Studies on Population Movement in Germany), 1907, that fertility decreased with economic and social progress. He advanced statistical proofs to enunciate the doctrine: "more food, less people." The position was diametrically antithetical to that of Malthus. In 1909 the principle of *Konkurrenz der Genuesse* (competition of enjoyments) was adumbrated by Brentano in *Die Malthusische Lehre* (The Doctrine of Malthus). In the dictum "the higher the standard, the lower the fertility," could be enunciated his message in accordance with which sex enjoyment is counteracted by other and newer enjoyments.

The population economies of modern times has grown along three different channels. First, there is the school which accepts both the law and policy enunciated by Malthus. Secondly, there is the school which rejects Malthus wholesale. Finally, there are those who reject the Malthusian law but accept the Malthusian policy. The Malthusian policy of control or restriction has, again, found representatives in two different schools: (1) individual, voluntary and moral (Malthus himself), (2) social, statal, legal and artificial (Mill, Wagner, "Neo-Malthusians").

It is to be observed that socialists are to be found both among Malthusians and anti-Malthusians. Equally noteworthy is the fact that among those belonging to the third school there are both socialists (Wagner, Kautsky) and non-socialists (Schomoller). Finally, Neo-Malthusians are Malthusians by all means but may belong to the anti-Malthusians group also.

The most characteristic common feature in the law of population enunciated by the anti-Malthusians is to be found in the doctrine of social polarity or antithesis between civilization and reproduction, namely, as civilization advances, the population naturally tends to decline (Doubleday, Spencer, Tallquist, Proudhon, Leroy-Beaulieu, Dumont, Fetter, Mombert, Brentano, Gonnard). And in this group there are mainly two methods of approach. One is statistical and the other biological.

II. Birth-Rates in India (1921—30).

The examination of Indian birth rates as presented in this paper is mainly a statistical study. It will serve to connect the Indian demographic zones with the zones of other areas and place all these zones, so far as recorded data can be of help in this matter subject no doubt to the limitations of all international statistics, on a more or less uniform basis.

As for extra-Indian areas the comparability of Indian figures is eminently questionable. Luckily for India there are certain countries in the world for which an accurate return of the population in intercensal years is not available. By adopting the League of Nations¹⁵ method used in regard to such countries it has been possible therefore to estimate the Indian ratios for the Census of 1930 in a comparable manner. In all these countries it is assumed that at the beginning of each intercensal year the population changed at an uniform rate between one census and the next. In order to calculate the rates the figures of births and deaths registered by the Department of Public Health are brought into proportional relation with the estimates thus arrived at.

The discrepancies¹⁶ in figures between the different publications, wherever these are noticeable, do not as a rule go beyond

¹⁵ *Census of India 1931, Vol. V Bengal and Sikkim, Part 1, Report.* (Calcutta 1933), p. 126.

¹⁶ The tables and charts are based on the figures in the *Annuaire Statistique International*, Geneva for 1928, *Annuaire Statistique de la Société des Nations 1931-32* *Statistisches Jahrbuch für das Deutsche Reich* (Berlin) for 1928-30, *Compendio Statistico* (Rome) for 1930, Woytinsky : *Die Welt in Zahlen*, Vol. I (Berlin, 1925),

0.1 or 0.2 and may be ignored. Wherever there are discrepancies between the charts and the tables used in this essay, these are to be accounted for by reference to the dates. The average for the decennium 1901—10 is not naturally the same as that for the quinquennium 1905—09 or 1901—05 and of course cannot be identical with the figure for a single year 1901, 1905 or 1910. Similarly, while comparing the charts with the tables it would be necessary to pay separate attention to the figures for 1921—25, 1922—26, 1927, 1928, etc.

For all practical purposes the period of five years in India, from 1922 to 1926 may be regarded as more or less “normal” from the socio-economic standpoint as well as from that of public health. Let us take the average of this quinquennium for each of the nine major provinces of British India in regard to the births per thousand inhabitants. These “mean” ratios will indicate a phase in the trend of the “natural” population movement or rather the present state of the conditions affecting the birth-standard of the majority of the peoples living in India.

The Indian scale of births per thousand (1922—1926)¹⁷ looks as follows:

I. *Above 40 per 1000 (for a total of 34.5 millions)*

1. Bihar and Orissa (33.9 mill.)	35.6
2. Bombay (19.3 mill.)	34.17
3. United Provinces (45.5 mill.)	34.01
4. Madras (42.3 mill.)	31.7

II. *Above 30 per 1000 (for a total of 141 millions)*

1. Central Provinces (13.9 mill.)	41.48
2. Punjab (20.6 mill.)	40.8

and *Tatsachen und Zahlen Europas* (Vienna, 1930), *The Financial and Economic Annual of Japan* (Tokyo, 1926), *Annual Report of the Public Health Commissioner with the Government of India for 1926* (Calcutta 1928) and for 1930 (Calcutta 1932); *Census of India 1921 and 1931*; *Annuaire Statistique de la Statistique General de la France 1931* (Paris, 1932); *Statistical Abstract for the United Kingdom 1913—31* (London, 1933).

¹⁷ *Annual Report of the Public Health Commissioner with the Government of India for 1926*, Vol. I (Calcutta, 1928) p. 9.

III. *Under 30 per 1000 (for a total 67.3 millions)*

1. Assam (7.5 mill.)	29.41
2. Bengal (46.6 mill.)	28.9
3. Burma (13.2 mill.)	28.36

The mean ratio for the two areas comprising 34.5 mill. ranges between 40.8 and 41.48, that for four regions comprising 141 millions between 31.7 and 35.6, whereas that for the three comprising 67.3 millions between 28.36 and 29.41. The total range is therefore very extensive from 28.36 to 41.48 and the average for all British India comes up to 33.35.

Some of these coefficients can become intelligible only if we place them in the perspective of certain figures in fairly large-sized European countries. Thus we have seven out of eighteen *compartimenti* (districts) of Italy,¹⁸ namely, Sardinia (30.45 per thousand), Veneto (30.77), Abruzzie Molise (32.33), Campania (33.11), Calabrie (33.74), Puglie (34.59), and Basilicata (36.22) exhibiting in 1925 the range above 30 up to 36.22. The birth characteristics of Madras, the United Provinces, Bombay as well as Bihar and Orissa belong in pure statistics to these regions scattered as they are in different parts of the Italian mainland and islands. In other words, the men and women in the neighbourhood of, say, Benares, Lucknow, Poona and Ahmedabad, Patna and Gaya etc., would not find it difficult to understand the conditions prevailing in the human lives of Naples and Salerno as well as Brindisi and Bari. Similarly, the birth conditions in the surroundings of Rome (Lazio district, 28.71) or of Venice, Padua and Verona (Veneto) would appear assimilable to those to which the Assamese, the Bengalis and the Burmese are used.

It is more reasonable, however, to compare the birth rates of the Indian provinces with those of the single states of Europe rather than with those of the districts in the European states. As the largest province of India, Bengal, with its quinquennial mean 28.9 per thousand can then be placed almost on a par with

¹⁸ *Compendio Statistico 1930* (Rome) p. 36.

entire Italy (40 mill. in 1925) with 27.82 per thousand. When one analyzes the birth-figures intensively one finds, therefore, that, statistically speaking, one is hardly justified in using such expressions as they "Indian birth level" or "European birth-standard" and so forth. It is evident that Bengal might be placed in Europe exactly where Italy happens to be and Italy might change place with Bengal in Asia.

The above remarks hold good in the main about more recent figures also. In February 1931 the latest census was taken and it is possible to describe the nine provinces in regard to the ratio per 1000 of estimated population as in June 1930.¹⁹

The birth rates for 1930 are placed in the three following groups:

I. *Above 40 per 1000* (for a total of 15.5 millions)

1. Central Provinces (15.5 mill.)	43.46
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II. *Between 30 and 40 per 1000* (for a total of 179.3 millions)

1. Punjab (23.5 mill.)	38.91
2. Madras (47.7 mill.)	36.17
3. United Provinces (48.4 mill.)	34.48
4. Bombay (22.2 mill.)	34.47
5. British India (268.1 mill.)	33.38
6. Bihar (37.5 mill.)	33.18

III. *Under 30 per 1000* (for a total of 73.3 millions)

1. Assam (8.6 mill.)	29.53
2. Burma (14.6 mill.)	27.15
3. Bengal (50.1 mill.)	25.86

There was only one province in Group I, the Punjab being removed to Group II. The second group comprising, as it did, five provinces accounted for a total population of 179.3 millions. The change in the order of provinces in this group is to be noted.

¹⁹ *Annual Report of the Public Health Commissioner with the Government of India for 1930* (Calcutta 1932), Vol. I, p. 6, (population of the provinces in 1931), p. 489 (ratio per 1000 of estimated population in June, 1930.)

Bihar which had been the first in the 1922—26 schedule was the last in the 1930 classification. Group III comprised the same three regions as before, namely, Assam, Burma and Bengal, the latter two changing places. Bengal with 25·86 came down to the bottom and was lower than Italy of 1925 with 27·82.

III. The World Standard in Birth-rates (1927—30).

To master the significance of the figures as registering the facts of international vital statistics on a more extensive scale let us examine the "world-standard" in the matter of births for the year 1927.²⁰ And we shall distribute the same quinquennial mean ratios from India (1922—26) in this medley of nations. It is possible then to observe the birth-behaviour of mankind as grouped in the following three classes.

I. ABOVE 30 PER THOUSAND (1927)

(a) above 40 per thousand

1. R. S. F. S. R.	43·7
2. Egypt	42·7
3. Chile	41·5
4. Central Provinces (Ind.)	41·48 (1922—26)
5. Punjab (Ind.)	40·8 (1922—26)

(b) between 30 and 40 per thousand

6. Bihar and Orissa (Ind.)	35·6 (1922—26)
7. Japan	35·0
8. British India	34·8 (1926)
9. Bombay (Ind.)	34·17 (1922—26)
10. Rumania	34·1
11. United Prov. (Ind.)	34·01
12. British India	33·35 (1922—26)
13. Bulgaria	32·9
14. Portugal	32·4
15. Madras (Ind.)	31·7 (1922—26)
16. Poland	31·6
17. Argentine	31·3

²⁰ *Annuaire Statistique International 1928* (Geneva) p. 23, *Statistisches Jahrbuch fuer das Deutsche Reich 1930* (Berlin), *Internationale Uebersichten*, p. 13, 14.

II. BETWEEN 20 AND 30 PER THOUSAND (1927)

(a) between 25 and 30

1. Lithuania	... 29.4
2. Assam (Ind.)	.. 29.41 (1922—26)
3. Bengal (Ind.)	.. 28.9 (1922—26)
4. Spain	.. 28.6
5. Burma (Ind.)	.. 28.36 (1922—26)
6. Italy	... 26.9
7. Hungary	... 25.2

(b) between 20 and 25

8. Canada	... 24.6
9. Czechoslovakia	.. 23.3
10. Holland	... 23.1
11. Australia	... 21.7
12. U.S.A.	.. 20.6 (1926)
13. New Zealand	.. 20.2

III. UNDER 20 PER THOUSAND (1927)

1. Germany	.. 18.3
2. Belgium	.. 18.3
3. France	.. 18.1
4. Austria	... 17.8
5. Switzerland	... 17.4
6. England and Wales	... 16.3
7. Sweden	... 16.1

Let us call Group I the group of "high" birth rates, Group II will then be the group of "medium," and Group III that of "low" birth rates.

The main features of the Groups remained the same at a later date, e.g., in 1930.²¹ For this the most recent period of statistics the classification of countries would look as follows:

I. ABOVE 30 PER THOUSAND (1930)

(a) Above 40 per thousand

1. Palestine (1.3 millions)	52.9
2. Egypt (14.7 mill.)	44.4 (1929)
3. Costa Rica (0.5 mill.)	44.2
4. Central Prov. (15.5 mill. Ind.)	43.46
5. R.S.F.S.R. (82.0 mill.)	42.7 (1928)
6. Straits Settlements (1.1 mill.)	40.6

(b) Between 30 and 40 per thousand

1. Chile (4.2 mill.)	39.8
2. Ceylon (5.3 mill.)	39.0
3. Punjab (23.5 mill. Ind.)	38.91
4. Federated Malaya States (1.7 mill.)	37.2
5. Porto Rico (1.5 mill.)	37.1 (1929)
6. Jamaica (1.0 mill.)	37.0
7. White Russia (4.9 mill.)	36.4 (1928)
8. Madras (47.7 mill. Ind.)	36.17
9. Ukraine (29.0 mill.)	35.3 (1929)
10. Rumania (18.0 mill.)	35.0
11. Philippines (12.3 mill.)	35.0
12. United Prov. (48.4 mill. Ind.)	34.48
13. Bombay (22.2 mill. Ind.)	34.47
14. British India (268.1 mill.)	33.38
15. Bihar (37.5 mill. Ind.)	33.18

²¹ *Annuaire Statistique de la Société des Nations 1931-32* (Geneva 1930), pp. 18-25 (total population), p. 52, (annual birth rates). For India I (b) 14, refers to the *Annual Report of the Public Health Commissioner with the Government of India for 1930* Vol. I p. 432, and the second figure is taken from the *Annuaire*. See also the *Annuaire Statistique de la Statistique Générale de la France 1931* (Paris 1932), pp. 19, 13. The figures in the *Statistical Abstract for the United Kingdom (1913-31)* (London 1933) are slightly different. pp. 6-7.

16.	British India (352·3 mill.)	..	32·9
17.	Poland (32·1 mill.)	.	32·4
18.	Japan (64·7 mill.)	..	32·4
19.	Greece (6·3 mill.)	..	30·9
20.	Bulgaria (5·9 mill.)	..	30·6
21.	Portugal (6·1 mill.)	.	30·6
22.	Argentina (11·4 mill.)	..	30·1 (1929)

II. BETWEEN 20 AND 30 PER THOUSAND (1930)

(a) Between 25 and 30

1.	Assam (8·6 mill. Ind.)	.	29·53
2.	Hawaii (0·3 mill.)	..	29·3
3.	Venezuela (3·1 mill.)	..	28·9
4.	Spain (23·5 mill.)	.	28·2
5.	Lithuania (2·3 mill.)	...	27·3
6.	Burma (14·6 mill. Ind.)	.	27·15
7.	Italy (41·1 mill.)	.	26·7
8.	Union of South Africa (8·0 mill.)	...	26·6
9.	Bengal (50·1 mill. Ind.)	...	25·86
10.	Hungary (8·6 mill.)	...	25·4

(b) Between 20 and 25

1.	Uruguay (1·9 mill.)	.	24·0
2.	Canada (10·2 mill.)	...	23·9
3.	Netherlands (7·9 mill.)	...	23·0
4.	Czechoslovakia (14·7 mill.)	...	22·7
5.	Finland (3·3 mill.)	..	22·2

III. UNDER 20 PER THOUSAND (1930)

1. Latvia (1.9 mill.)	... 19.9
2. Australia (6.4 mill.)	.. 19.09
3. Irish Free State (2.9 mill.)	... 19.8
4. U. S. A. (123.6 mill.)	... 18.9
5. New Zealand (1.5 mill.)	.. 18.8
6. Belgium (8.0 mill.)	... 18.7
7. Denmark (3.5 mill.)	.. 18.7
8. France (41.8 mill.)	... 18.0
9. Germany (64.4 mill.)	.. 17.5
10. Norway (2.8 mill.)	... 17.4
11. Esthonia (1.1 mill.)	.. 17.4
12. Switzerland (4.0 mill.)	.. 17.2
13. Austria (6.7 mill.)	.. 16.8
14. United Kingdom (45.9 mill.)	... 16.8
15. Sweden (6.1 mill.)	.. 15.4

In the above birth-scale of nations a number of new countries has been taken in. One or two items call for notice. Chile has been brought down from sub-group (a) to sub-group (b) in Group I. Australia, U.S.A. and New Zealand have been brought down from Group II to Group III. In each group and sub-group the position of the regions has changed somewhat. But the countries were more or less the same in 1930 as in 1927. The trend in the decline is not to be ignored, however, as indeed it will be discussed in a subsequent section.

IV. The Birth-Rate under Climatic Conditions.

The high birth-rate group comprises twenty-eight items and as the range is rather extensive (from 30 to 52.9 per thousand) we have divided it into two sub-groups. In the sub-group (a) there are three regions in Asia, one in Europe, one in Africa and one in Central America. A glance at the map will show that these six regions are distributed in the most "arbitrary" manner conceivable in the two hemispheres. There is, besides, hardly anything

in common between these regions from the standpoint of climatic characteristics. R.S.F.S.R. is indeed huge enough to be described as a continent by itself and naturally embraces a diversity of temperature and rainfall. Palestine is much below R.S.F.S.R. in latitude, further below are Egypt and the Indian Central Provinces. These latter, although lying within more or less the same latitudes do not belong to one and the same climatological zone, because of the fundamental difference in their mountain and river systems, etc. Nor does Costa Rica exhibit the same hydrographical and orological features as Palestine or the Straits Settlements. In terms of latitude, longitude, heat, moisture, rivers and mountain systems as well as currents of winds and proximity to the sea we have in this sub-group really six heterogeneous zones. And yet they constitute but one zone from the standpoint of demography, namely, the zone of high or rather highest birth-rates. Palestine with 52.9 may be taken as standing apart from the rest. Demographic cousins and relations are not geographic neighbours or comrades. We encounter here uniformity of socio-biological and socio-economic phenomenon even in spite of diversities in geography, meteorology and climatology. Birth-rates have reacted indifferently to the physical or physiographical conditions of the habitant.

The twenty-two items of the sub-group (b) or rather the twenty countries (excluding the two counts of British India) point similarly to the same story. In this company Japan, the Philippines, Ceylon, Malaya and the five Indian Provinces belong to Asia, White Russia, Ukraine, Rumania, Poland, Greece, Bulgaria and Portugal to Europe, while four, namely, Chile, Porto Rico, Jamaica and Argentina to Central and South America. Climatographically Japan certainly does not belong to the inland systems of the U.P. and Bihar in India nor of course of Poland in Europe. A high birth-rate zone has been constituted out of diverse physiographical conditions obtaining in the different quarters of the globe. There is no physical nexus, no local tie binding the demographic neighbours or relatives with one another.

Communities possessing more or less the same birth-index do not flock together. They happen to be scattered broadcast in all directions. Reproductive virility has manifested itself to one and same extent under diverse suns and stars. In another way of looking at things we find that fecundity like adversity "makes strange bed-fellows."

Demographic Japan can thus be sandwiched between Indian Bihar and European Greece, the Indian U.P. (1922—26) between Bulgaria and Rumania in the Balkans (1927) and Madras between White Russia and Ukraine. On the other hand, the Japanese Isles in the Pacific and Poland of European inland find themselves on the same level. In all these cases the birth-lines have to be drawn independently of reference to the heat-lines, isotherms and ocean-streams.

The European regions of the sub-group (b) are exhibited below for the purpose of detailed analysis:—

1. White Russia (4.9 mill.)	... 36.4 (1928)
2. Ukraine (29.0 mill.)	. 35.3 (1929)
3. Rumania (18.0 mill.)	.. 35.0
4. Poland (32.1 mill.)	.. 32.4
5. Greece (6.3 mill.)	... 30.9
6. Bulgaria (5.9 mill.)	.. 30.6
7. Portugal (6.1 mill.)	... 30.6

Of these seven territories all except Portugal may be said to belong to one geographical complex. At any rate, they are physically neighbours to one another. Beginning with Greece at the southern end we go northwards passing Bulgaria, Rumania, and Poland in succession. And if we turn eastwards we have, first, Ukraine and then, White Russia. This huge European block exhibits the birth-coefficient ranging from 30.6 to 36.4. For certain purposes these regions may be regarded as belonging to the Near East. Very often it is possible to describe them as constituting the "Balkan Complex," although somewhat enlarged.

Perhaps the description, Central-Eastern and South-Eastern Europe, would suit these territories in an appropriate manner.

In this European complex of high birth-coefficients Rumania and Poland together account for 50.1 million inhabitants. The United Provinces of India (48.4 mill.) possessing as they do the coefficient 34.48 might then be, demographically speaking, placed in that part of Europe where Poland and Rumania are situated. Or, again, Poland and Rumania could be placed in India where Madras (48.4 mill.) with 36.17 has its place.

It is to be observed that the whole of Soviet Russia in its European territories belongs to the zone of high coefficients. One part, R.S.F.R.S. belongs to sub-group (a), and the two remaining parts, White Russia and Ukraine to sub-group (b). In these three parts Soviet Russia is inhabited by 127.0 million people.

For Europe, then the total high-coefficient group is made up of the following factors:

1. Russia

a. R.S.F.R.S.	}	127.0 mill. ²²
b. White Russia		
c. Ukraine		

2. "Balkan complex" in part

a. Poland	}	62.3 mill.
b. Rumania		
c. Bulgaria		
d. Greece		

3. Portugal

6.1 mill.

Total ... 195.4 mill.

We find that 195.4 million inhabitants of Europe exhibited the birth index ranging from 30 to 42.7. The total population of Europe (including the whole of European Russia but exclusive of Asian Russia) was estimated at 505.7 millions in 1930. In other

²² *Annuaire Statistique 1931-32* (Geneva), p. 26.

"The figure for the total is not the exact sum of the individual figures."

words, 38.6 per cent, i.e., more than one-third of the population in Europe was used to the high birth rates of Group I.

Climatologically, then, as is well-known, Europe is not one. Nor is Europe to be distinguished from other continents or sub-continents so far as the pragmatic bearings of climate on the birth-behaviour of nations are concerned. The Near East, the Balkan Complex, the whole of European Russia, Central-Eastern and South-Eastern Europe, indeed 38.6 per cent. of the men and women used to the latitudes, longitudes, mountains, rivers, seas, winds as well as flora and fauna of Europe were in 1930 behaving in the selfsame manner as the inhabitants of regions in Central and South America, the Far East, Western Asia and Africa and certain parts of India.

The second group, that of "medium" birth-rates comprises fifteen countries, and these again as usual are widely distributed throughout the world. This, again, admits of a division into two sub-groups. We find that Italy finds herself between Burma and Bengal, Burma between Lithuania and Italy, Bengal between Italy and Hungary, Czechoslovakia between the Netherlands and Finland. It is to be observed that three Indian regions, namely, Assam, Burma and Bengal belong to the group of medium birth-rates and that indeed Italy's birth-rate (26.7) is slightly higher than Bengal's (25.86). Altogether, the continuity of the slow curve from 22.2 up to 29.53 covering as it does fifteen regions is quite patent. It is equally patent that this demographic continuity is not paralleled by a geographical propinquity and affinity or continuity of heat-zones or rain-zones or other physico-physiographic zones. The zones of medium birth-rates are then like those of the high birth-rates, independent of geographical position and climatological complex. We notice once again, that one and the same fecundity-chart has to be plotted out and superimposed on the most diverse meteorological and climatological charts. As long as the Bengali is a close demographic neighbour or cousin to the Lithuanian of Northern Europe, the Italian of Southern Europe and the Hungarian of Central-Eastern Europe

human reproductivity is to be treated as capable of flourishing with one and the same degree of virility under the most varied physico-physiographical conditions.²³

V. The Race-Factor.

We shall now examine the zones of high and medium birth-rates from the standpoint of their racial make-up. To take the highest birth-index first. We find that it is represented equally by the Slav and Slavo-Tartar and other hybrids of Northern and Eastern Europe, the Arab, Semitic, Arab-Copt and other hybrids of north-eastern Africa, the Latin (Spanish) and the Latin-American "Indian" and other hybrids of South-America, the "Indo-Aryans," Aryo-Dravidians and other hybrids of Northern and Central India as well as the Malayan hybrids of the Straits. Be it observed *en passant* that racially the Punjabi does not belong to the same stock as the Marathi or Hindi-speaking Indians of the Central Provinces or the Gujaratis of Bombay. Race-mixture is an ethnic fact in all the six regions of the sub-group (a) in Group I as really in every group of mankind. For our present purpose it is only necessary to note that high reproductivity is distributed far and wide amongst the most diverse races. There is no special ethnic affinity or comradeship between the peoples which agree in the high reproductive facts. The most thickly coloured chart of the world from the standpoint of birth-rate is not characterized by any special sets of anatomical or physiognomic features, any characteristic skin pigment, construction or colour of the eye, nasal angle, or hairform. Vital statistics have succeeded in bringing together under one cover men and women from the ethnologically very distant groups.

The diversity of ethnic elements is no less manifest in the sub-group (b). The "Mongolians" of Japan, the Scytho-Dravidians of India, the Latins and Slavs of Europe, the "Spanish-Americans," the Creols, the Malayans, and what not have met on

²³ Friedrich: *Minerva Atlas* (Leipzig), p. 5—10 (*Das Wetter, Das Klima* I, II).

a common platform in order to exhibit the birth-index of 30.1 to 39.8. The Tamils and Andhras of Southern India are found to be intimate comrades of the Russians, Rumanians, Ukrainians and the Biharis, Oriyas, Gujratis and Marathas close companions of the Japanese, Greeks, Poles, Portuguese and Bulgars. Ethnological charts have indeed to be forgotten while one seeks to plot the fecundity-charts of mankind.

Let us then take the zone of medium birth-rates. Here also in the sub-group (a) the Slav shakes hands with the Latin and the Magyar, and all the three with the Assamese, Bengali and Burmesè, i.e., the Mongolo-Dravidian, Aryo-Dravidian or predominantly Mongolian elements in the Indian stocks. In the sub-group (b) we come across a new race, the Teuton. The Teutonic element is not predominant in this group, however. In Canada it is not the exclusive factor. Indeed the Teutons are co-citizens here with the Latins and others: and in Czechoslovakia, again, the Slav shakes hands with the Teuton. Then there are Uruguay and Finland where non-Teutons are the ruling factors. The lower level of the medium birth group (20 to 25 per thousand) is thus like the upper quite multiracial. It is noteworthy, however, that while the Slav and the Latin are in evidence as much in the high as in the medium birth-groups, and the Latin can go further down, as we shall see later, the Teuton's birth-range does not extend to the high, nay, does not transcend the lower level of the medium. While conscious of this distinctiveness it is still possible to observe that birth-index has made the Slavs, Latins, Magyars and Teutons "bed-fellows" of one another. And so far as the sub-group (a) is concerned, it is no less obvious that the immediate demographic neighbours of the people of Bengal are the Latins of Spain and Italy, the Slavs of Lithuania, and the Magyars of Hungary. Altogether, then, the charts of human reproductivity can ignore the charts of ethnography.

The category "race" is being used here in a comprehensive sense so as to include not only blood-element and the items of physical anthropology but some of the "cultural" elements as

well, for instance, first religious and secondly, marriage customs. But we may take some of the cultural items separately also and we have to observe that the Moslems of Egypt, Palestine and the Straits Settlements, the Greek (Orthodox) Catholics of Russia, the Roman Catholics of Central America, the Jews and Christians of Palestine, as well as the Hindus and Moslems of certain regions in India, however much they differ in cult, rites, ceremonies, and superstitions agree in keeping the birth-index at the highest level. Some of the members of these religions exhibit a somewhat lower level too, and in that good company seek the Buddhists of Japan also a place. It is to be observed that the "wandering Jew" is to be found in each of the two sub-groups.

All these religions and their denominations are no less represented in the zone of medium birth-rates. One important item to note is the appearance of the Protestants as a new element in the faith factor of the birth-charts. The index-range from 20.2 per thousand to 26.6 per thousand, is a noticeable feature of the Protestants. But it is to be observed that neither in Canada nor in Hungary or the Union of South Africa can Protestantism be regarded as the sole religious denomination. The Catholics (and Jews) also play an important role in these countries from the standpoint of number and have therefore to be cited as to a certain extent responsible for the mediumness of the birth-rates. Then, again, in Spain and Italy the Roman Catholics are preponderant and Roman Catholicism can therefore claim the medium birth-rates for itself. The same may be claimed likewise by Hinduism in Assam and Bengal as well as Buddhism in Burma. It is obvious, therefore, that medium index is not the exclusive feature of any particular religion or custom, but that like the high index it counts among its contributors all the great and small religions and denominations of the world. Religion can, therefore, be ignored, broadly speaking, by the international birth statistics.

To avoid misunderstanding it is proper, however, to note specially that Protestantism is hardly, if at all, in evidence above the birth index of 26.6 per thousand (South Africa). The other

religions or denominations, however, begin at the topmost and come down to 22·2. And as we shall see later, Roman Catholicism can go hand in hand with Protestantism in bringing the birth-index much lower than 20 per thousand.

VI. Politics and Birth-Rates.

Leaving the noteworthy features of Protestantism aside for the present let us step out of race and religion into the domain of politics, and we find that the birth-charts are as indifferent to political as to ethnographical and climatographical charts. In the high birth group Palestine is a mandated area, Egypt is a semi-subject country, the five Indian provinces as well as the Straits, Ceylon, Malaya States, Jamaica and the Philippines are subject countries. The remaining twelve are independent countries; and among these last, indeed, two, Russia (R.S.F.S.R. White Russia and Ukraine) and Japan, are known to be "great" or "first class powers." The degree or kind of political independence has failed to engender characteristic birth-coefficients "natural" or necessary to each, and to bring about a distinction in fecundity between the different peoples. No matter whether the peoples are subject, semi-subject or free, one touch of reproductivity has made them all kin, and vital statistics brought them together under one roof. A birth-rate kinship prevails in the midst of political diversities in the medium group also, where, again, a "great power" Italy, and an Imperial power, the Netherlands, are on terms of vital intimacy with what may be described as lower grade states. Indeed Italy (26·7) is the closest neighbour to the subject countries, Burma (27·15) and Bengal (25·86). Evidently, even with medium birth-rates certain countries can win freedom, for instance, Lithuania, Hungary, Czechoslovakia and Finland, and others maintain their political independence, nay, acquire the status of a great power. Similarly, a high birth-rate has not prevented Poland from acquiring independence, or Argentine, Portugal, Bulgaria, Greece and Rumania from maintaining it in tact. Nay, with a birth rate as high as that of British India and

higher than that of Assam, Burma and Bengal, Japan can still be a first-class power, and of course R.S.F.S.R., which with 42.7 per thousand approaches even the Central Provinces (43.46) and beats the Punjab (38.91) has always been regarded as a first class power.

The situation does not change when instead of general facts bearing on external sovereignty the constitution or form of government is considered. It is self-evident that in every one of these Groups the form of government is varied. Peoples with the monarchical constitution (Sweden and the United Kingdom) are found to be demographic bed-fellows with the republican peoples (France and Switzerland). Birth-charts have not followed any constitutional maps. Neither republic nor monarchy can be described, on the evidence of facts, as in any special sense calculated to promote or hinder certain ranges of birth-coefficients.

VII. The "Low" Birth-Group of Today.

It is now time to attend to the low birth group (15.4 to 19.9 per thousand). There are fifteen countries in this group. First, then, as regards geography and climatology, the Central-European regions, Germany, Austria and Switzerland, are fundamentally "continental." They differ essentially from the "insular" British Isles, New Zealand and the Irish Free State. Latvia, Esthonia, Sweden and Norway of Northern Europe as well as Belgium, Denmark and France are sea-washed. The heat-lines of the almost peninsular France sharply differentiate her from Central Europe on the one hand and the Northern islands and peninsula on the other. Then there are two "continental" blocks, the U.S.A. and the "island" Australia. In spite of all these physico-physiographical diversities the regions have been made to move to one point under the magic wand of birth-behaviour.

(a) *Food-resources, Climate and Birth-rate.*—While discussing the climatological conditions of the high, medium or low birth-rates it is perhaps desirable to direct attention to a fact of rather universal importance in the economic structure of mankind. In

ancient and medieval times down to the beginnings of the industrial revolution the entire civilized world was the theatre of agricultural operations. Agriculture was indeed a synonym for civilization. In other words, in spite of differences in latitude, longitude, heat-waves, wind and sea currents, mountains, rivers and so forth the valleys of the Nile, the Euphrates, the Hwangho and the Indus, as well as the regions of Hellenic and Latin culture, Gaul, Britain, Prussia, the countries of Northern and Eastern Europe were all agriculturally fit enough to be in the main "autarchic" or self-sufficient in food and raw materials of the handicrafts. Even today all the different corners of the two hemispheres with the exception of actual deserts are agriculturally fit to maintain quite a mass of human beings unless of course the people themselves choose to neglect agriculture in the interest of some other economic activities, and remain more or less "monocultural."²⁴

We may take the case of the United Kingdom which is to be regarded as an extreme instance in regard to the dependence on foreign countries for food supply. And yet her capacity to supply herself is not negligible.

In 1913 the out-turn of wheat in Great Britain and Ireland was 1,576,000 tons.²⁵ The total import in that year was 5,294,000 tons. The home production was thus 22.9 per cent of the United Kingdom's total supply.

The out-turn and imports of two other cereals, namely, barley and oats are shown below for the same year in tons:—

<i>Cereal</i>	<i>Home Production</i>	<i>Imports</i>	<i>Total</i>
1. Barley	1,580,000	1,122,000	2,702,000
2. Oats	2,930,000	908,000	3,838,000

In barley the home production was 58.4 per cent and in oats 76.3 per cent of the respective total supplies.

²⁴ In regard to *Autarkie* and *Monokultur* see the *Zeitschrift fuer Geopolitik* (Berlin), 1932-38.

²⁵ *Statistical Abstract for the United Kingdom 1913 to 1931*. (London 1933) pp. 44-245, 340-41.

For the year 1931 the position of the three cereals in regard to home production, imports and total supply is indicated below (in tons):—

<i>Cereals</i>	<i>Home Production</i>	<i>Imports</i>	<i>Total</i>
1. Wheat	1,013,000	5,971,000	6,984,000
2. Barley	848,000	771,000	1,619,000
3. Oats	2,087,000	438,000	2,525,000

In wheat the home-production was 14·5 per cent, in barley 52·3 per cent and in oats 82·6 per cent of the respective total supplies.

For the present we are not interested in the economic and social reasons for the United Kingdom's decline in home production as regards cereals. But it is evident that the proportion is considerable and we understand that from the standpoint of agricultural fitness as a purely physical or physico-climatological phenomenon there is nothing to prevent the United Kingdom from developing larger doses of autarchy in regard to the supply of cereals.

The "natural" fertility of U. K. or, at any rate, its "productivity," which is no less a cultural than a natural fact, is remarkable. In the international scale of yields per hectare (2 1/2 acres) the United Kingdom's position is quite high.²⁰ In regard to wheat some of the highest yields per ha. are indicated below in quintals (namely 2 cwts.) for the year 1930-31:

Netherlands	...	...	28·7 q. per ha.
Denmark	...	...	27·6 „ „
Irish Free State	...	...	27·5 „ „
Sweden	...	...	22·3 „ „
Malta	...	...	22·2 „ „
Belgium	...	...	21·7 „ „
Germany	...	...	21·3 „ „
New Zealand	...	...	21·1 „ „
United Kingdom	...	...	20·2 „ „
Switzerland	...	...	19·5 „ „

²⁰ *Statistical Abstract for the U. K. 1918-31* (London 1933) pp. 246-47
Annuaire Statistique de la Société des Nations 1931-32 (Geneva 1932) pp. 86-87.

In other words, the United Kingdom is one of the most productive regions of the world so far as the out-turn of wheat is concerned. In productivity she is far above the well-known agricultural regions, nay, the so-called wheat-powers of the world. Thus, for instance, the yields are as low as the following in the world's famous "wheat-belts":

Canada	...	...	11.4 q. per ha.
U.S.A.	...	...	9.4 „ „
U.R.S.S.	...	...	8.7 „ „
India	...	...	8.3 „ „
Argentina	...	...	7.9 „ „
Australia	...	...	7.9 „ „

We should understand that climatologically the U. K. is by all means a much better wheat-region than many areas that have in recent years acquired the reputation as such in international trade-statistics.

In barley²⁷ the U. K.'s position is as follows:

Netherlands	...	...	28.2 q. per ha.
Denmark	...	...	28.0 „ „
Irish Free State	...	...	25.5 „ „
Belgium	...	...	24.4 „ „
Malta	...	...	23.8 „ „
Norway	...	...	19.7 „ „
New Zealand	...	...	19.0 „ „
Germany	...	...	18.8 „ „
United Kingdom	...	...	18.5 „ „
Japan	...	...	18.4 „ „

²⁷ *Annuaire Statistique*, pp. 90-91.

The U. K. was in 1930-31 the ninth in the list of statistically recorded regions in barley and wheat. And it is interesting to observe that none of the "agricultural continents," nay, none of the agricultural zones of Europe, neither Russia, nor the Balkan Complex, nor the Baltic states, nor France possessed a productivity index high enough for a place among the first ten.

As producer of oats²⁸ the U.K.'s position is likewise high by the world standard as indicated below:—

Denmark	...	...	25.7 q. per ha.
Irish Free State	..	...	24.6 „ „
Norway	...	...	20.4 „ „
Belgium	...	...	20.3 „ „
New Zealand	...	...	20.0 „ „
Netherlands	...	...	19.8 „ „
Switzerland	...	...	19.7 „ „
United Kingdom	...	...	19.3 „ „
Sweden	...	...	17.4 „ „
Germany	...	...	16.4 „ „

In the production of oats also none of the alleged agricultural countries in Asia, Africa or America could stand comparison with U. K. in 1930-31.

We are not interested for the time being in comparative productivity as such or in the economics of agriculture. It is enough to be convinced that industrial powers like the U. K. and Germany are, so far as agriculture is concerned, more "fit" to become autarchic or self-sufficient in food supply than it is the custom to imagine among economists and statesmen. Indeed, they are agriculturally stronger and better equipped than most of the world-famous agricultural regions. And whatever be the climate, agriculture, especially the cultivation of food crops, has been known to flourish in the most diverse regions of the world.

²⁸ *Annuaire Statistique, (Ibid)* pp. 92-93.

Should the population of a region be dependent on its possibilities or capacity for the production of food, then regions like the U. K. or Germany, i.e., such territories as during the most recent epochs of culture-history do not happen to be known as agricultural would be able to feed and maintain very large numbers. On this hypothesis the birth rate in such regions can rise quite high and indeed higher than in the regions generally known to be agricultural.

We may ignore in the present connection any considerations of future prospects in regard to food supply or birth-rates. Comparative statistics furnish us with the following objective facts:

1. The climates are known to be diverse.
2. And yet the world was and continues to be pretty uniform in its agricultural capacity and food foundations.
3. The birth-rates also are more or less uniform in spite of the diversities of climate.

Historically speaking, then, within the limitations of zones recorded in world-culture, we are led to conclude as follows:—

1. Food-supply has been independent of climatic conditions.
2. Birth rate also has been independent of climatic conditions.

It should appear that climate has not been the supreme factor in the questions relating either to agriculture or to population. A "climatological interpretation" of food supply would then be as unwarranted as a "climatological interpretation" of birth-rate. Neither is a function of climate.

Now, while neither food supply nor birth rate depends on climate, it does not follow, logically, that they themselves are somehow organically connected. The birth rate is not necessarily a "function" of food supply. In other words, it is not possible to adumbrate an "agricultural interpretation" of population on

the basis of the world-statistics alone in such a manner as to establish a *causal* nexus between the birth-rate and food supply.

But in an objective analysis of world-economy two facts of outstanding importance are observable, namely :

1. The productivity of the soils in regard to cereals has been historically well-distributed throughout the world.

2. The productivity of the human race in regard to physical offsprings has likewise been well-distributed through the world during the ages.

The parallelism of these two phenomena may therefore lead to a presumption to the effect that some sort of "agricultural interpretation" of population, although not necessarily in the causal or functional sense should seem to be plausible. In case such an "agricultural interpretation" were tenable an easy explanation might be furnished by its exponents. For, in their examination the conditions of food supply happen to be uniform throughout the world (and along with them the birth rates also) simply because the climatic conditions themselves, in spite of their *seeming* diversity are in reality uniform. The "fundamental climatological uniformity" of the habitable globe would according to them be the basis of the fundamentally uniform distribution of food resources²⁹ throughout the world. And in their view the fundamental climatological uniformity consists in the facts that although the latitudes, longitudes, mountain and river-systems, wind and sea-currents etc. happen to be diverse these diversities *pragmatically* are not important enough to prevent the soils from being utilized for agriculture and the allied occupations.

Objectively, however, it would be extremely difficult,—except for purely theoretical considerations,—to get used to the idea of a "fundamental climatological uniformity" of the Earth's surface. Indeed, this idea is likely to be treated as much too wide, vague, metaphysical or monistic to suit the actual conditions

²⁹ Animal food and all vegetable food stuffs besides wheat, barley and oats have been excluded from the present consideration.

of the habitable globe. Humanly speaking, it should be impossible to ignore the local diversities in the sun's rays, heat, rainfall, etc. as solid realities. It would by all means be necessary to attach to them the importance they deserve for practical agronomy and health considerations.

Under such realistic surveys of the world's climatic conditions, then, we encounter a very curious phenomenon in regard to human fecundity on the strength of actual facts as unearthed by the statistics of world-economy. We are forced to admit that, in regard as much to the low birth rates as to the medium and high, the peoples exhibiting them happen to inhabit regions that are climatologically very varied. Birth-charts and climate-charts do not go hand in hand.

(b) *The Racial Complex.*—Now as to the race-factor in Group III. France, Belgium and parts of Switzerland are Latin (and Celtic), the U. K. Teutonic (and Celtic) the Irish Free State, Celtic, Latvia and Esthonia Slav, Norway, Sweden and Germany, Teutonic (and Slav), while Austria, the rest of Switzerland, New Zealand, and Australia predominantly Teutonic, the U.S.A. and Canada Teutonic (Latin and Slav). It is important to observe that the Latin and the Slavic races are quite significant as contributors to the low birth-rates of the contemporary world (France 18.0, Belgium 18.7). On the other hand, it cannot be ignored that it is the Teutonic element that is today chiefly associated with the low birth index, and as we have observed before, it slightly transcends the lower level in the medium group (up to 26.6 per thousand). But all the same, as long as the Latins and Celts of France and Belgium are demographic neighbours of the Teutonic Austrians, Swiss and Germans it would not be possible to associate the low birth-rates with any one race exclusively.

Similarly in regard to religion, England and Wales as well as Switzerland to a considerable extent, Germany (64 per cent) and Sweden preponderantly happen to be Protestants. They are matched however almost equally by Belgium, France and Austria which are nearly wholesale Catholic. Here, again, the "wander-

ing Jew," has to be noticed in all the fifteen countries. Protestantism cannot get exclusive credit or discredit for the low birth rates, the "international birth-strike," although the fact that even in the medium group it does not exceed the 26·6 per thousand limit requires to be noted as a characteristic. The Catholics happen to be nearly on a par with the Protestants in the lowering of birth-rates,—in "race-suicide," as it is often called,—proving once more that the birth lines of nations move independently of religious lines.

Finally, as regards politics and constitution the low birth group is as varied as the two other groups. The component members of this group are monarchists as well as republicans. Even under monarchy the birth-rate has actually been low. Indeed, the two countries with the lowest birth-rates, namely, Sweden and the U. K. are ruled by kings.

VIII. The Sociology of the Birth-Index.

An interesting order of facts comes out of an analysis of the three groups of birth index. It is obvious that each one represents (1) a multiplicity of climates, (2) a multiplicity of races and religions and (3) a multiplicity of political conditions. Statistically, therefore, cold regions do not invariably exhibit a high birth rate nor invariably a medium nor invariably a low one. Certain temperate regions are found in Group I, certain others in Group II and again in Group III. And so on. Similarly, the Slavs and Latins are distributed in all the three groups. The Indo-Aryans and Mongolians are found in Groups I and II, and the Teutons in Groups II and III.

The Roman Catholics exhibit high, medium as well as low index, Hindus and Buddhists high as well as medium. Last but not least, politically free people do not always go in for low birth-rates nor do subject peoples specialize in the high index. The "great powers" are numerically two in the high, one in the medium and four in the low birth-groups. Comparative vital statistics leads then inevitably to the conclusion that each of

(1) climatic, (2) ethnographic and (3) political conditions can represent a multiplicity of birth-groups. A parallelism of the two sets of phenomena is out of question.

The following sociological conclusions may now be drawn from the foregoing analysis of the contemporary birth-rates :

1. Mankind or rather the major portion of it may be divided into three or really five different birth-groups in the descending order, namely :

- | | | |
|-----|----------|--------------|
| (1) | above 40 | per thousand |
| (2) | 30—40 | „ „ |
| (3) | 25—30 | „ „ |
| (4) | 20—25 | „ „ |
| (5) | 15—20 | „ „ |

2. The Indian peoples find themselves in the first three groups.

3. In none of these three groups do the Indian peoples find themselves in “splendid isolation.” In each they are in good company with a large number of non-Indian and non-Asian peoples.

4. In no group can the birth-rate be described as a “function” of (1) Climate, (2) race and religion and (3) politics. Nor can any of these three factors be described as calculated to generate exclusively the birth-rate of any particular group.

(a) Different conditions of climate do not prevent the rise of a more or less uniform birth-index. On the other hand, the uniform climatic conditions have given rise to diversity in birth-index.

(b) Different races and religions have been associated with one and the same or allied birth rates, and again a uniformity in birth-index has not been in evidence under more or less uniform racial and religious conditions.

- (c) The divergence of political and constitutional systems has not militated against the rise of a more or less uniform birth-rate, whereas even under uniform political and constitutional circumstances the birth-index has been diverse.

There is no natural and necessary connection between the birth-rate and any of these three factors. The contemporary birth-rates of nations exhibit a profound independence of the geographico-ethnologico-political circumstances.

5. That is, a climatological, ethnographical or political "interpretation" of population (and birth-index) is not warranted by comparative statistics. The birth-rate in each group is factually independent of these three factors. And again each of the three factors can have its own birth group.

6. An Indian or Asian birth-index (in the sense of certain birth-rates as being exclusively Indian or Oriental in geography, race or politics) does not exist, nor does a European or West-European.

7. Ethnologically, the birth-index of Teutons and Protestants is an interesting feature of vital statistics. This, however, does not form an exception to the general indifference of birth-rates to climatic, racial and political circumstances, as will be demonstrated subsequently.

8. The birth-index of nations is then to be explained, if a really scientific explanation is possible, more perhaps by biological than by non-biological considerations.

The "independence" or "indifference" of birth-rates, or the absence of parallelism between them and geographico-ethnologico-political conditions must not however be misunderstood so as to imply that climate as such has no benevolent or malevolent influence on births, that human beings *as human beings* do not by their religious, marital or other customs and law consciously or

unconsciously seek to enlarge or control the size of the family.³⁰ Objective statistics indicate simply that no special case may be pragmatically made out for or against certain geographical areas, racial factors or political conditions in regard to the birth rates *as they actually obtain in the world today*. Whatever may be the conscious contributions or unconscious effects of all these agencies we find that in terms of concrete reality, namely, the birth-rate, the result does not vary simply because the agencies happen to be diverse. This is why two climatic neighbours do not invariably give rise to demographic neighbours, i.e., peoples with more or less the same birth-index. This is why, again, the Catholics in one group exhibit the high index, in a second group they exhibit the medium, while the low is exhibited by them in a third group. And this is why, further, a republic can find itself in Group I, a second in Group II, another in Group III, and so on.

A conscious "population policy"—be it in the direction of large family, birth-control or stationary state,—may still be embarked upon by every group of human beings, no matter what be the region or the race, according to the requirements of the hour. It should perhaps seem to be theoretically possible—within the biological limits, of course—to develop any desired or desirable birth-rate in any and every region, for any and every race, and under any and every form of government. Finally, it is for the human will to decide whether the population policy is to be "passive" or "active," negative or positive, and with what velocity that policy is to be carried out.

(To be continued.)

³⁰ Burgdoerfer : *Volk Ohne Jugend* (Berlin 1932), Marsal : *L'Influence de la Legislation sur le Developpement de la population*, a paper for the *Congresso Internazionale per gli studi sulla Popolazione* (Rome 1931,) Gini's paper in *Lo Stato Mussoliniano* (Rome 1930); Borkiewicz : *Bevoelkerungslehre* (Leipzig 1918) Zahn : *Wie die Familie so das Volk* (Munich, 1930).

THE CONCEPT OF CAPITAL

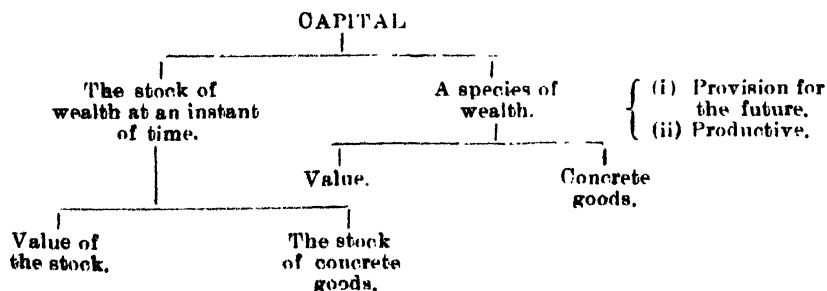
BY

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Speaking on capital about a century ago Senior said, "Capital has been so variously defined that it may be doubtful whether it has any generally received meaning." (*Political Economy*, p. 59). Towards the close of the last century Fisher made a similar remark. Of the concepts in Economics, "few" he said "are more fundamental and none more obscure than capital." (*Economic Journal*, December 1896, p. 509). These remarks hold good even today.

Out of the many varying definitions of capital two broad divisions are discernible. There are some who would take the whole stock of wealth existing at an 'instant' of time as capital. According to them there is no difference between capital and wealth as such, the former being one aspect of wealth. There are others who would delimit capital and would regard it as a 'species' of wealth. In regard to each of these concepts again there is a further classification which is no less significant. Is capital,—whether it is composed of the whole stock or a part of it,—to represent 'concrete goods' or their 'value'? The following chart gives a picture of the different senses attributed to capital:



Adam Smith and his followers use the term in a restricted sense. They understand by capital a definite portion of the total wealth existing in a society. The total wealth they call stock, and that portion which yields revenue they call capital. In his chapter on the 'Division of Stock' Adam Smith examines how capital is formed and describes the nature of the different kinds of stock. When a person's stock is just sufficient to afford the necessities of life, he is not in a position to save any portion of it. But when he acquires more than this minimum he wants to derive a revenue from the surplus. This portion which he expects would afford him a revenue is capital. The other portion 'supplies his immediate consumption' and is not capital. Similarly, the general stock of any society divides itself into two parts, namely, that portion 'which is reserved for immediate consumption, and of which the characteristic is that it affords no revenue or profit.' The other portion is capital, the characteristic of which is that it yields revenue.¹ According to Adam Smith, the stock of food, clothes, household furniture, etc., 'which have been purchased by their proper consumers' does not fall under the category of capital. I refer to Adam Smith because it is he who committed the original sin of delimiting capital like that,—of taking it as a species of wealth. It is his idea that has been influencing English Political Economy even to this day. The 'Master's Voice' is found recorded (with minor variations in regard to details) in many of the important works of English economists. Quite a large

¹ This capital again is of two kinds, fixed capital and circulating capital. The former stands for that capital which affords revenue without changing masters, and the latter stands for that capital which affords revenue by changing masters. "In all countries where there is tolerable security, every man of common understanding will endeavour to employ whatever stock he can command, in procuring either present enjoyment or future profit. If it is employed in procuring present enjoyment, it is a stock reserved for immediate consumption. If it is employed in procuring future profit it must procure profit either by staying with him, or by going from him. In the one case it is a fixed, in the other it is a circulating capital." *Wealth of Nations*, edited by Cannan, p. 267. For criticism of Adam Smith's conception and classification of capital, see Cannan's *Theories of Production and Distribution*, Chap. IV.

section of Continental economists also holds to this narrow concept, although there is a good deal of difference among them in regard to the attributes of capital and the nature of commodities to be classed under it. For my purpose it is not necessary to mention all the variants of the concept.² Neglecting minor divergences we may fix our eyes on two characteristics which are said to mark off capital from other kinds of wealth.

(i) It is a provision for the future.

(ii) It is productive.

Indeed all the various definitions of capital of this group of economists,—definitions which Fisher calls 'classificatory,' conform more or less to one or the other of these categories. Marshall also follows in the lines laid down by Adam Smith, and looks upon capital as a kind of wealth. But, as usual, it has been his pre-occupation to establish that 'unity in substance' which underlies 'differences in form and in words.' He makes it his business to prove that the difference between those economists who regard capital as 'a provision for the future' and those who regard it as 'a means of production, is more apparent than fundamental, that they all come to the same conclusion, although they travel by different routes. Those who regard it as 'a provision for the future' lay stress on 'prospectiveness' which controls the supply of capital. The other section lay stress on 'productiveness' which controls the demand for capital. (See Marshall, *Principles*, 7th Edition, App. E. pp. 786-87).

But how is the boundary line to be drawn between Capital and Not-Capital? Granting in the abstract that capital consists of goods which are productive or which provide for the future, how are we to classify goods in the market and place them under proper categories? Is it possible to ear-mark those goods which serve as means of production or as provision for the future?

² A historical development of the concept is given in Bohm-Bawerk's *Positive Theory of Capital*, Chapter III. For various definitions of capital see also Marshall's *Principles*, 7th Edition, Appendix E, p 788n, and Fisher's *The Nature of Capital and Income*, Chapter IV.

Finding it impossible to arrive at a definite classification John Stuart Mill has said that "the distinction . . . between capital and Not-capital does not lie in the kind of commodities but in the mind of the capitalist." (*Principles*, Vol. I, p. 70). This is but a counsel of despair. Indeed, as Prof. Fisher has shown, whatever definition we may start with, there is no escaping from the logical conclusion that 'capital' and 'wealth' are co-extensive, that no hard and fast line of demarcation can be drawn between them. If capital is a provision for the future, all wealth is like that: for 'future' is an elastic term. The present suggests an 'instant of time' and the use of any kind of wealth requires some duration of time. Where is then the line to be drawn? Marshall recognises the difficulty and admits that those who have sought a line to mark off capital from wealth "have found themselves on an inclined plane, and have not found a stable resting place till they have included all accumulated wealth into capital." (*Principles*, App. E., p. 787).

Then there is the test of productivity. Well, if capital is productive, all wealth is so. The older material definition of 'productivity' now stands discredited. Adam Smith, it is well known, gave a narrow, material definition of 'productivity.' He designated as productive only those efforts which were calculated to produce 'vendible commodity.'³ This somehow fits in with his capital concept. Of the total stock of a society, one portion yields tangible material object, and the other portion yields non-material benefits: and there may be some justification in forming two different categories for these objects. Today, however, the term 'productivity' bears a wider connotation, and it is perhaps universally accepted that production means creation of utility, and

³ According to him, any labour which "does not fix or realise itself in any permanent subject or vendible commodity" is unproductive; and in the class of unproductive labourers are placed among others "Churchmen, Lawyers physicians, men of letters of all kinds; players . . . musicians, opera-singers, opera-dancers etc. . . ." Poor Adam Smith thus failed to appreciate the productivity of his own labour in the class-rooms!

anything that yields utility is productive. (See Taussig, *Principles*, Vol. I, Chapt. 2, Marshall, *Principles*, p. 65, Cassel, *The Theory of Social Economy*, pp. 21—24). The labour of a musician is as much productive as the labour of the artisan who makes musical instruments, and the labour of the domestic servant satisfies our wants and is productive just as the labour of the cabinet-maker who supplies materials for furnishing our drawing rooms. As Taussig says, "all those whose labours satisfy wants—all those who bring about satisfactions or utilities—are to be reckoned as taking part in production, and are to be called productive labourers." (*Principles*, Vol. I, p. 19). Does not this change in the meaning of 'productivity' necessitate a revision of the capital concept? Is it not more rational to take all wealth as productive because all wealth has utility and is valued in the market? Where is then that line differentiating capital from wealth? The line that had once been drawn by Adam Smith has faded away. And yet quite a significant section of economists fail to realise the implications of this wider, non-material definition of productivity. Marshall in particular clearly recognises that anything that is valued is productive, and yet looks upon capital as something distinct from wealth. He proposes "to count as part of capital from the social point of view *all things* other than land, which *yield income . . .*" etc. etc. (Italics are mine). But at the same time he excludes "furniture and clothes owned by those who use them" from the category of capital, as if these things do not yield income. Is it that he takes income to stand for material objects and not for non-material benefits? According to Fisher income consists of services of wealth, and in the ultimate analysis, all wealth yields income. Capital, he says, is not a kind of wealth, but an aspect of wealth. When reference is made to a point of time, the entire stock of wealth of a society is capital. Now, this stock of wealth (or capital) yields services over time, and these services, the income from capital, may be regarded as a flow. "Every article of wealth is to be pictured as simply the tangible and visible handle to hold fast invisible steamers or filaments of

services reaching out into the future." (*Economic Journal*, December 1897, p. 526).

Not that Marshall does not realise the logical inconsistency which a narrow use of the term involves. In fact he feels that "the only strictly logical position is that . . . which regards 'social capital' and 'social wealth' as 'co-extensive' so that from the abstract and mathematical point of view Fisher's position seems to him to be incontestable. Nevertheless he finds it hard to depart from 'economic tradition' and from 'market usage' in regard to terminology.

Acceptance of Fisher's definition, he is afraid, would bring confusion in economic discussion, as it does not conform to the market usage. This is not to examine whether in fact Fisher's definition differs from the usage of the market. Fisher himself denies it and makes it his business to establish that his use of the term is more in accord with the language of the market. Apart from that, is it not an open question whether scientific definitions of terms have *invariably* to follow the language of the market? It is no doubt desirable that we should avoid confusion as far as possible; but where an alternative has to be chosen, there is no reason why one should not prefer scientific precision to mere conformity to market usage. In cases of dispute the economist must rule, not the practical business man. Market usage may be made to follow the definition given by the economist. Indeed confusion arises less from a lack of harmony between the definition of the economist and the language of the business man than from a lack of unanimity in regard to definitions among economists themselves.

Then as to economic tradition, it cannot be denied that if we go by majority the narrower English definition prevails, and capital has to be taken as a species of wealth. But is that a sufficient test of the validity of a definition? It is all very good to follow the Chinese practice of worshipping the ancestors; but there is just a risk of one's respect for ancestors being carried too far. Besides, there is the French tradition which would favour

a comprehensive use of the term. If Marshall invokes the authority of Adam Smith, Fisher has the shoulder of Turgot to lean on. Turgot, it will be remembered, uses the term 'capital' in the sense in which the term 'stock' is used by Adam Smith. "Whoever, either from the revenue of his land, or from the wages of his labour, or of his industry, receives each year more values than he needs to spend, may place this superfluity in reserve and accumulate it; these accumulated values are what is called capital." (Turgot, *Reflexions*, Edited by Ashley, p. 50). Thus, according to Turgot, capital consists of the entire saving of a society and not of a portion of it, as Adam Smith would have it. That is Fisher's contention too. All saving, he says, creates capital. If c' stands for capital at any instant of time, and c for capital for a previous instant of time, then $c' = c + A - S$, where A means addition during the interval and S means subtraction; or $c' - c = A - S$, i.e., to say the increase of capital is equal to the saving. If t denotes time, $\frac{C' - C}{t} = \frac{A - S}{t}$, i.e., to say, the average rate of increase of capital is equal to the average rate of saving.

Why then this ambiguity? Why is it that two rival traditions have grown over the concept of capital? In order to appreciate it we have to examine the significance of the capital-concept in the general body of economic analysis. Indeed, any particular branch of economic analysis is a part of a complete system, and where systems differ, the links which compose them must also differ. It appears to me that the difference in the attitude towards the Theory of Distribution goes a great deal towards explaining the difference in regard to the use of the term capital. For, so far as I have been able to discover, those whose predominant interest is in the theory of 'Factorial Distribution' are in favour of a delimitation of capital, to take it as a 'factor' of production along with land and labour; and those whose preoccupation it is to study a theory of 'Personal Distribution' are in favour of a comprehensive use of the term. It is well known that with the classical economists the theory of distribution was

one of factorial distribution,—a division of social income into Rent, Wages and Profits. Marshall also follows in that line and develops a theory of factorial distribution. Like the classical economists he takes capital as a distinct factor of production having a share in the 'National Dividend' along with the other factors, land and labour. Thus he says: "By far the most important use of the term capital in general . . . is in the enquiry how the three agents of production, land (that is, natural agents), labour and capital, contribute to producing the national income . . . and how that income is distributed among the three agents." (*Principles*, p. 78.)

Fisher, on the other hand, is not content with giving merely a theory of factorial distribution. He says that the theory of distribution, in its ultimate analysis, raises problems of inequalities in the distribution of wealth among persons. He thus divides his study into two parts,—one relating to the distribution of income according to the factors which produce that income, and the other relating to the distribution of income according to the *persons* who own and enjoy it. The latter problem is a problem of grading the population according to income,—a problem of "discriminating the relatively rich and the relatively poor." As it suggests a comparison of the incomes of different persons, attention has to be paid to values and not to quantities. It does not matter, for purposes of this kind of analysis, whether what I possess is a piece of land, a sewing machine or a piano. What matters is whether what I possess is greater or less in value than what my neighbour does. Capital is here all-embracing. It stands for property, for things 'owned' by persons; and the important thing for the economist to see is the value of the property owned, and not the kind of property.

Fisher's analysis of the problem of factorial distribution does not seem to me to be satisfactory. Yet it is worth while examining why even there he takes capital and wealth as synonymous. Unlike Marshall he takes a pragmatic view of the problem, and reduces capital and income to a common standard of value in order

to make them homogeneous. By income he means 'the use of wealth over time.' National income is the 'flow of services' consumed, and not, as Marshall would have it, the 'flow of goods and services' produced; and capital is simply 'income capitalised.' Thus anything that yields income is capital and the problem of distribution is a problem of "the income of different classes of capital."

Foremost among the exponents of the theory of personal distribution is Prof. Cannan. He believes that the classical economists studied the problem of distribution on entirely wrong lines. The problem of distribution is one of a division of income among persons,—a problem as to "why inside each community some individuals and families are above and others below the average in wealth." (*Economic Outlook*, p. 215.) His study relates to the causes of 'greater or less inequality,'—of the "existence of a larger or a smaller middle class . . . of a small very rich class or of a very large extremely poor class." It is a study of the causes of poverty, and 'poverty is a question of persons rather than of categories.' And Prof. Cannan has the honour of being 'the anticipator' of the discovery that capital is the whole stock of wealth at an instant of time. Like Fisher he uses the term capital in the sense of property and gives a monetary expression to it.

It is also true that Turgot gives a theory of personal distribution, and as has been already pointed out, he identified capital with stock. Turgot's analysis of the causes of 'inequality in the division of properties' still reads so remarkably fresh that I am tempted to quote his words in full:

"The original proprietors at first occupied . . . as much of the ground as their forces permitted them to cultivate with their family. A man of greater strength, more industrious, more anxious about the future, took more of it than a man of a contrary character. He whose family was more numerous, as he had more needs and more hands at his disposal, extended his possessions further: here was already a first inequality. All pieces of ground

are not equally fertile; two men with the same extent of ground and the same labour, could obtain a very different produce from it: second source of inequality. Properties, in passing from fathers to children, are divided into portions more or less small, according as the families are more or less numerous; as generations succeed one another, sometimes the inheritances are still further subdivided; sometimes they are reunited again by the extinction of some other branches: third source of inequality. The contrast between the intelligence, the activity, and above all, the economy of some and the indolence, inaction and dissipation of others, was a fourth principle of inequality, and the most powerful of all.”⁴

In all these cases it is found that attempts have been made to adapt the capital concept to the theory of distribution and the difference in the attitude towards that theory is to a very great extent responsible for a difference in the use of the term ‘capital.’ There is, however, one writer who may apparently seem to form an exception. I mean Böhm Bawerk,—that great Austrian who has done perhaps more than any other economist on the continent towards the analysis of the phenomena of capital and interest. Böhm Bawerk gives two definitions of capital,—one said to be adapted to the theory of production and the other to the theory of distribution, and he emphasises the fact that the explanation of the existence of interest does not lie in the productivity of capital. In essence he keeps up the Smithian idea of capital as revenue-yielding. The two conceptions that he gives are also based on Adam Smith’s old distinction between National Capital and Individual Capital. By capital in general Böhm Bawerk means “a group of Products which serve as means to the Acquisition of Goods.” He uses the terms ‘Acquisitive Capital’ or ‘Private Capital’ as synonymous with this wider conception. Under this general conception is put as a narrower category that of ‘social

⁴ Turgot: *Reflections on the Formation and the Distribution of Riches*. Economic Classic series, Edited by W. J. Ashley; pp. 12-13. Compare with these remarks the analysis of the causes of the inequality of incomes done by Prof. Cannan (*Economic Outlook*, pp. 241-43). See also the relevant pages in Dalton’s *Inequality of Incomes*.

capital' which stands for "a group of products destined to serve towards further production," i.e., say, a group of 'Intermediate Products.' Then he proceeds to examine the bearing of these concepts on different economic phenomena. The importance of the narrower concept of 'social capital' is in the sphere of production, and the problems it raises are how capital is formed and what function it does in the economic production of goods. As applied to the theory of distribution, the problem of capital is one of Private Capital. Capital as a source of income is distinct from capital as an instrument of production. But Böhm Bawerk forgets that the phenomena of production and distribution are inter-related and one cannot be divorced from the other. In fact, in his study of the problem of interest he has drifted in spite of himself into a productivity theory. However much he has tried to disentangle the theory of interest from the theory of production, his explanation of the phenomenon of interest is ultimately based on the productivity of capital. Why is interest paid? Because "present goods are . . . worth more than future goods of like kind and number." But why this difference between present goods and future goods? He gives three causes: First, is the difference in 'the circumstances of want and provision in present and future,' second, is the general under-estimate of future wants, and the goods that are to satisfy them. But these causes only explain the existence of interest. They tell us nothing of the measure of interest. For that he turns to a third cause,—the technical superiority of present goods over future goods. "Present Goods," he says, "are, on technical grounds, preferable instruments for the satisfaction of human want, and assure us, therefore, a higher marginal utility than future goods." And why? Because a given quantity of productive instruments becomes more productive if the method employed is more 'roundabout.' It is this fact which he seeks to prove in connection with the problem of production, and it is again upon this that he bases his theory of interest.⁵ One

⁵ See his *Positive Theory of Capital*. Books II & IV.

has only to remember that in this part of his study he refers to value-product and not to physical product.

This brings me to a problem which deserves more attention than has hitherto been paid to it. Towards the beginning of this paper it was pointed out that there are two ways of expressing capital. Often it is expressed in terms of concrete goods. Sometimes again it is expressed in terms of value. It was Clark who first drew attention to this two-fold expression of capital. What he calls 'capital goods' refers to concrete forms of capital; and 'pure capital' refers to a fluid fund. Interest, he says, is an income from 'pure capital,' and the income from 'capital goods' is rent. The tendency in recent years is toward using capital in the sense of 'pure capital,' i.e. to say, expressing it in terms of value. It has been seen that Cannan and Fisher give a monetary expression to capital and that they are justified in doing so when their business is to compare the incomes of individuals in a society. From the point of view of factorial distribution also it is sometimes convenient to adopt the value concept. The entire structure of the marginal productivity theory of distribution rests on the assumption of a minute divisibility of each factor, and so far as capital is concerned, it is minutely divisible when it is taken as a fluid fund. When, on the other hand, the problem is to examine the effect of an increase or decrease of capital upon the material welfare of a society, capital as well as income is taken in terms of concrete goods. This explains Marshall's preference for a 'technological' concept of capital; for Marshall considers "the use of the term *capital* from the point of view of enquiries into the material well-being of society as a whole."

But is it at all rational, one may ask, to take capital as a distinct factor of production and as a distinct source of income? From the philosophical point of view there is hardly any significance in placing certain materials under a group distinct from land and labour; for, in the analysis of 'real cost' the important thing is to see whether a particular factor is human or non-human. The use of capital means real sacrifice because it is

ultimately resolvable into labour and waiting.⁶ It is a concentrated form of labour, 'mediate labour,' as Böhm Bawerk calls it. Capital itself is no independent factor of production.

From an empirical point of view the relation between 'factorial incomes' and the cost of finished goods is studied in two ways. According to Marshall, whether the income from a particular factor forms a constituent element of cost of production depends upon whether the supply of the factor is elastic or not. He thus divides 'factorial incomes' into three species, rent, quasi-rent and interest. Rent is the income from "the original and indestructible" productive powers, the supply of which is absolutely fixed. They cannot be increased by human efforts because they are 'original,' and they do not diminish because they are 'indestructible.' Rent is therefore a surplus and is no part of social cost. Every other productive factor except those that are at once 'original' and 'indestructible' has an elastic supply. They form one group and their incomes constitute the total cost in the long period. But as there are different degrees of elasticity in the supply, this latter group admits of innumerable subdivisions. If, over a particular period a factor, *Alpha*, has an inelastic supply, its income shows characteristics of rent and is a surplus, but it ceases to be so if, when the period is extended its supply becomes elastic. Again over that extended period, the supply of another factor, *Beta*, may be fixed and its income may appear to be a surplus, but in a like manner it ceases to be a surplus if, when the period is further extended, its supply becomes elastic. These incomes are called quasi-rent because they are not pure economic rent and yet show characteristics of rent in relation to a period over which the supply of the relevant factors is inelastic.

⁶ Cannan objects to Marshall's use of the term 'waiting.' "Marshall's suggestion of 'waiting' is worse than either saving or abstinence; waiting is inaction, and inaction cannot create material equipment. Material equipment has to be actively collected before it is used, not waited for." (*Review of Economic Theory*, p. 153.) This objection does not seem to me to be warranted, for Marshall speaks of labour *plus* waiting as the cause of capital, and where there is labour there is action.

A clearing up of the confusion between these incomes and pure economic rent is important inasmuch as a tax on the former does while a tax on the latter does not affect the National Dividend. This is indeed the real significance of Marshall's concept of quasi-rent. But this analysis does not by any means require that capital as such should be taken as a distinct factor of production.

The Austrians, on the other hand, study the relation between 'factorial incomes' and the cost of finished goods in a different way. According to them, whether the income from a particular factor forms a part of cost of production depends upon whether the relevant factor admits of a single use or alternative uses. It is not a question of land, labour and capital. It is a question of 'cost productive means' and 'specific productive means.'⁷ Here again there is hardly any significance in placing capital as a distinct factor of production.

From the point of view of Factorial Distribution the term 'capital' defined as a portion of stock which yields revenue serves no useful purpose. It is neither an independent factor of production, nor is its use important for a study of the elements of costs. If the validity of the definition of a term is to be tested by the way it functions in different directions in which it is made use of, then surely the classical definition of capital does not satisfy our test.

⁷ For a fuller elucidation of the relation of costs to factorial incomes, see my *The Conception of Costs* (Calcutta Review, Oct. 1932).

PLAIN LIVING AND HIGH THINKING : A STUDY

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Plain living and high thinking as an ideal prescribes an ethical standard of living. It does not imply renunciation of wealth or a life of asceticism. It presupposes on the other hand enough of economic freedom and it further claims to purify wealth of its material grossness, retaining its full advantages. Poor people can hardly appreciate it and rise up to it. Talk about this ideal to a hungry man in the street. He will scoff at you. He will ridicule you. Talk about it to a Rockefeller. He will understand it and appreciate it. A poverty-stricken man has hardly a choice to make as far as his standard of living is concerned. High thinking is an anathema to him. A man who is worn out in a hand-to-mouth struggle cannot develop as he should and can hardly think of such ideals. Let there be enough to eat, decent clothes to wear, comfortable houses to live in, a thorough education based on ethical conceptions of life and plenty of leisure for fruitful intellectual work and then this ideal can be worked out into practice.

It aims at a 'rational distribution' of wealth, the motive for such distribution being provided by an internal urge from within an ethical atmosphere rather than a political system super-imposed from above. It inculcates that noble conduct of life which impells strong producers to produce more and share their production with

their weaker neighbours afflicted by poverty, want and disease. "The Sporting Man," who in the words of Prof. Alfred Marshall, "shows little concern for anything higher than the pleasures of eating and drinking," should find no place in society according to this ideal. It preaches the priesthood of intellect and the brotherhood of man—the greatest contribution which the spiritualism of the east could make to the materialism of the west.

This ideal now-a-days is being very much misunderstood in the East; particularly India—the birth place of such idealism and has been made a justification for an inefficient and miserable standard of existence made possible by economic necessity. In the west in spite of the evils of materialism, 'high thinking' has found expression in more than one concrete form. Compulsory and free primary education in England was made possible by additional taxation on rising incomes after the Industrial Revolution. Some of the best-equipped modern universities, colleges and schools owe their existence and success to the wealthy men of Europe—the products of modern Industrialism. That there is misery and starvation there, nobody will deny. The number of the unemployed there is colossal but a single famine in this country claims proportionately more victims than the number of the unemployed in the west. That an unemployed man in England goes in a taxi smoking his cigar to get his dole, while millions of workers in this country lead a life which will be tabooed as 'unfit' for human beings, is a fact. The western countries are apparently in a better position than India to appreciate this ideal. "A country industrially undeveloped tends to suffer from a certain intellectual dullness and the outlets for the diversity of talents are few," would be fairly applicable to the India of to-day.

The appreciation of this ideal, if not its complete realisation, in this country was more possible in ancient times—an age of plenty when wants were few and simple and comparatively there was more of economic freedom than in the present times. The population was sparse enough and the bountifulness of nature yielded enough of food with a little amount of work.

A perusal of the accounts of various foreign travellers even as late as the time of Moghuls goes to show that India was a land of plenty—overflowing with milk and honey.

Linchonton—a Dutch traveller visited India in the years (1583—88). He gives a fascinating account of the plenty of Bengal in those days. An ox or a cow could be had in those days in Bengal for 1 Lirijen (about $7\frac{1}{2}$ annas in modern currency). Sheep, fowl, sugar and other things were sold at similar rates. Of rice, there was never any want in the province and it was exported to other countries. “A candit of Ryce, which is as much, little or more or less as fourteen bushels (of Flemish measure) is sold there for half a gilderne and for half-a-dollar.”¹ This works out to be a little over six maunds for a rupee. Then again Coryat—an English traveller stated that he could maintain himself very comfortably in his travels with ‘meats, drinks and clothes’ for 2d. a day. If an Englishman in India could get his ‘necessaries and comforts of life with 2d. a day it might be interesting to enquire what was the average daily income of a common labourer at that time in this country. Such an estimate is supplied by W. G. de Jough.² An average labourer according to his estimate earned 2·7d. a day, i.e., $1\frac{7}{8}$ d. more than Coryat used to spend. An average labourer, therefore, could live, in those days, a life of ease and comfort comparable to British standards of living.

No wonder then if he could appreciate the true import of this ideal—Plain Living and High Thinking—made possible for him by economic freedom according to the then standards of necessities and comforts.

It stands to reason to presume that possibly there was more of ‘plenty’ in the earlier Hindu times when population was not so dense and pressure on the soil not so acute as in the later times of the Moghuls. Then add to this age of plenty an atmosphere of placid serenity, noble imaginations and high resolves preached by Gautum Buddha and Shankra-Acharia.

^{1, 2} Indian Economic Life—Brij Narain.

The result could not be anything else but an ethical conduct of life which impelled people to shun sordid ambitions and preach the gospel of Plain Living and High Thinking, being assured of course of their economic freedom made possible by the bountifulness of nature.

Coming down to the present times we find a definite tendency amongst the masses towards a lowering of the standard of living. Various reasons seem to be responsible for it.

Firstly, British rule gave comparatively more of peace and security of life and property and population began to increase until it reached the saturation point. The increase of population since 1872, when the first Census was taken, up to 1931 has been 71·2. Neither the area under food grains, nor Industrialisation along the modern lines kept pace with this increase. According to the estimates of Mr. Sapre, the optimum number as far as agricultural population is concerned has long been passed. . . "Under Indian conditions an average of twenty to twenty-five acres of 'dry land' and of five to seven acres of 'wet land' suffices to support a family but if holdings were rearranged on this basis more than half of the existing population would be displaced." And then owing to the increase of population and the laws of inheritance, the average holding in India has come to be between 3 to 4 acres. Cultivation according to the modern methods of agriculture is well nigh impossible. We are getting 'diminishing returns' from the soil under the existing methods of production, and the agricultural incomes are falling. Lord Curzon rightly observed as follows in his budget speech in 1901. "In every country that is so largely dependent on agriculture, there comes a time and it must come in India, when the average agriculture income per head ceases to expand for two reasons;—First, that the population goes on increasing. Second that the area of fresh ground available for cultivation does not increase *pari-passu*, but is taken up and thereby exhausted. When this point is reached, it is of no good to attack the Government for its inability to fight the laws of nature. What a prudent Government endeavours to do is to increase its non-agricultural

sources of income." What Lord Curzon said in the year 1901 has already come out to be true as far as agricultural production is concerned. The remedy as Lord Curzon observed lies in Industrialisation. But Industrialisation along the modern lines has been very slow. The new large-scale Industries can almost be counted on fingers. And what is more—even the population released by the Cottage Industries, on account of competition of machine made goods from inside and abroad, has not been wholly absorbed by the new large-scale Industries. Each successive census therefore, shows an increase in the population supported by agriculture and a decrease in the population supported by Industries. And India is the only country among the civilized countries of the world which shows a progressive decrease in population supported by Industries. The increasing population, therefore, without a corresponding increase in the new sources of wealth, adversely affected the standard of living.

Secondly, the construction of Railways and provision of up-to-date means of communication linked the Indian Market with the markets abroad. It stimulated the export of food stuffs, while sufficient care had not been devoted to enhance the productivity of the soil in order to create a real 'exportable surplus' without any detriment to the consumer. An Indian consumer had to pay the same price for his rice and wheat which a man in London would pay minus the freight charges, while wages in India did not rise to the same extent. The only alternative open to the Indian consumer was to cut down his standard of comforts to purchase his necessities of life and this he could do easily being dominated by the philosophy of "Plain Living and High Thinking."

Thirdly, besides the rise in prices of food stuffs the general level of prices in India was comparatively greater than that of England and other countries which were on the gold standard—a comparatively more stable system of currency in those days. While real wages in England were rising, wages in India did not rise to the same extent as prices.

The following table will bear out this conclusion :—

TABLE COMPARING THE MOVEMENT OF PRICES AND WAGES
BETWEEN INDIA AND ENGLAND.
1871—1893.

Year.	Index numbers of silver commodity prices in India.	Index numbers of wages in India.	Index numbers of Gold commodity prices in England.	Index numbers of wages in England.
1871	100	...	100	100
1873	107	100	111	112
1875	103	97	96	111.6
1877	138	97	94	109.8
1879	135	100	83	105.8
1881	106	99	85	106.5
1883	106	102	82	106.5
1885	113	106	72	109
1887	111	114	68	107
1889	125	112	72	109.8
1891	128	118	72	118
1893	138	119	68	117.4

Atkinson's silver prices in India in the Journal of the Statistical Survey March 1897 and W. T. Layton's Introduction to study of prices. Adapted from Ambedkar's Problem of the Rupee.

The following conclusions may be drawn from this table:—

- (1) Prices in India between 1871—1893 were rising more rapidly than money wages, thus reducing further the real value of wages.
- (2) Money wages in England between 1871—1893 were rising more rapidly than prices, thus enhancing the real value of wages.

This was a catastrophic period in the history of Indian Currency. Even in the normal span of fourteen years from 1900—1914, except the year 1907, we find the same tendency in evidence. The index numbers of the Statistical Department show, that in spite of the gold value of the rupee remaining stable, its internal purchasing power fell heavily during this period. Prices of all articles, excepting a few were higher in 1913 than in 1899. And wages were not rising proportionately. On account of the unlimited sale of Council Bills at a particular price, to maintain stability of exchange, more and more rupees had to be coined in India. This increase in the volume of currency had its inevitable effect of raising the level of prices to a much greater extent than in England and U. S. A.

The race between the price-level and the wage-level left a gap which could only be filled up by a lowering of the standard of living. This rise of prices has, no doubt, benefited a few big Zamindars, who have a surplus for the market, but the smaller farmer has little to gain by this rise in prices. And India is a country of small farmers.

Fourthly, the western civilization and culture imparted to the people of this country was rather incomplete and only helped to bring into prominence the comparative inferiority of the latter as far as their standard of living was concerned. A state-policy favouring the education of the Indians on European lines was adopted. The new ideas about standard of living engendered by the Industrialism of the west were conveyed to them through that education. An efficient standard of living, which added to the

productivity of the workers, was considered to be a good standard of living. The old idea of a few and simple wants and an atmosphere of 'placid serenity' came to be relegated to the background. An Indian was thus unhinged from his 'social moorings' but conditions which could fit him in the new scheme of things were not provided. He was not absorbed in the newly created commerce and industry. A consciousness of a better standard of life began to arise without the means to accomplish it. It only brought into clearer relief his own comparative position.

We shall see below whether an average Indian in these days is really capable of living a life compatible with the great ideal of Plain Living and High Thinking. Does he really earn enough of income which ensures him freedom from that degrading type of poverty which freezes the mind and benumbs the intellect and leaves a man incapable of high thinking?

The national income per head has been differently calculated from time to time. Dadabhoj Navrojee calculated in 1870 that the average income per head of the population was Rs. 20 per annum. The famine commission of 1880 calculated the agricultural income to be Rs. 18 and the non-agricultural income to be Rs. 9 per head. Thus the total income according to their estimate was Rs. 27 per head per annum. Lord Curzon estimated the total income to be Rs. 30 per head in 1901. According to the estimates of Sir Robert Giffin made in 1903 in his paper on "Wealth of the Empire and how it should be used," it was calculated to be £2 just the same as Lord Curzon's estimate. The recent and the highest estimate made by Findlay Sherras in 1922 was Rs. 116.

All these figures should be accepted and interpreted with caution. Firstly, such statistics in India have not been organised on scientific lines, and leave much to be desired. Secondly, the monetary increase in incomes does not really indicate improvement in the well-being of the people because prices have increased during the last thirty years reducing the real money value of these incomes. Thirdly, these estimates only go to show that if the total wealth of the country were redistributed amongst its total

population then a particular amount of income would be the share of each individual but it does not show whether the absolute share of the different classes of people in terms of the comforts and necessities of life to which those classes are accustomed has increased or decreased. These estimates can, however, be useful to some extent in giving us an idea of the economic position of this country as compared with the other countries of the world. And further they can enable us to examine the view which is often advanced that in recent years there has taken place with the development of the resources of the country and the growth of enterprise on the part of the community as a whole, a very considerable increase in their national income and consequently in their material well-being.

According to the most liberal estimate of Findlay Sherras which we adopt for our purpose, an Indian on average earns Rs. 9 per month. A comparison of this national income with the western countries would be interesting. It is £6 per month per head of the population for U. S. A., £4-4-6 for U. K., £3-4-4 for France, £2-10-0 for Germany.

It will thus appear that India claims the distinction in the modern times of showing the lowest income per head of the population as compared with the civilized countries of the west.

The national income is a rough index of the prosperity of the people. That it has increased during the last fifty years, nobody will deny. But does it really involve human or vital welfare is the real question? Money, after all, is means to an end. The end is necessities and comforts and luxuries of life. The amount of units of purchasing power is only incidental. The amount of commodities these units will purchase is the real thing. Now let us see whether this national income of Rs. 116 per head per annum can purchase for one man even his necessities of life. If we assume only the lowest possible ration which is given to prisoners in jail just to keep body and soul together, we find that a considerable amount of this income will be taken up by diet alone and very little will be left for other necessities of life. According to the

estimates of Col. J. P. Cameron, C.I.E., I.M.S., if a free man is to be given the scale of jail dietary worked at rates prevailing in the local markets, the cost of food per man per annum would be Rs. 97-13-10. Add to this the cost of clothing, house room, laundry and some innocent recreations of life. It is a wonder of wonders how all the people with an average income of Rs. 116 per annum would be able to meet these expenses when only diet, and that also the poorest kind, would take away Rs. 97-13-10. On the basis of these figures we can conclude that this national income is not sufficient even to provide for the people a decent standard of necessities for existence. It has been rightly remarked that the average income in India is just enough to feed all the people on condition that they all consent to go naked, live out of doors all the year round, have no amusement or recreation and want nothing else but food and that also the lowest, the coarsest and the least nutritious.

Imagine a country so rich in natural resources—perhaps the richest country in the world as far as mineral resources are concerned and so miserable in its standard of living. Can there be a better example of the contrast between the bounty of nature and the poverty of man in the twentieth century? Can a population with such a low standard of living appreciate this ideal of Plain Living and High Thinking? The answer is 'No.'

But this conclusion is of a very general and provisional character. It only shows that if the total national income were redistributed amongst the entire population of the country, the income per head would be so low that it would not ensure to the people of the country even the bare necessities of life. This hypothetical 'if' does not conform to the actual conditions of life. In actual life we find people rolling about in Rolls Royces and also people squatting on the pavements with nothing but rags on their body asking for a pice or two to satisfy the craving of an empty stomach. "In Bombay for instance, in the words of Vera Anstey, the motor car driven possibly by a Parsee lady dodges in and out between foot passengers and bullock carts, the latest

product of the Universities jostles with the fakir, the broad and beautiful streets look out on to the narrow alleys of an Eastern bazar. In a few moments one may pass from the luxurious dancing hall of the Tajmahal Hotel to dimly lighted back streets whose pavements are covered with the sleeping figures of the inhabitants of the Chawls, or from the operating theatre of an up-to-date hospital to the haunts of emaciated, disabled beggars, who drag their possibly self-mutilated limbs through the noisome dust and dirt of the gutters." This dismal picture of the conditions in Bombay, drawn by Vera Anstey, is true of all the big towns of India. It shows that the national dividend worked out above is distributed in a way which enables a part of the population to live a life of comfort and luxury and the majority of people in India are denied even the ordinary 'necessaries' for existence, i.e., food and shelter. And the economic well-being of the great majority is the real index of the human prosperity. It will be, therefore, more instructive to approach the subject from the standpoint of actual distribution of national wealth. An estimate, of the scales of income of the various classes of society indicating the proportion of population enjoying luxuries and comforts of life, living in comfort, on margin of subsistence and poverty would be more true to the actual conditions of life and helpful for our purpose.

An attempt to analyse the various grades of income has been made by Messrs Shah and Khambata. According to their estimates the national dividend, commencing from the top with the highest average income per head, is distributed as follows:—

- (A) 6000 Individuals with an average income of Rs. 100,000 per head per annum.
- (B) 230,000 Individuals with an average income of Rs. 10,000 per head per annum.
- (C) 270,000 Individuals with an average income of Rs. 5,000 per head per annum.

- (D) 2,500,000 Individuals with an average income of Rs. 1,000 per head per annum.
- (E) 35,000,000 Individuals with an average income of Rs. 200 per head per annum.
- (F) The rest of the population with an income of Rs. 50 per head per annum

These classes have been classified into the following categories and their percentage proportion to population has been worked out and shown below:—

	Percentage.
Class A—Enjoying comforts and luxuries of life ...	·0018
Class B—Living a little above comfort ...	·0721
Class C—Living in comfort ...	·0846
Class D—Living below comfort ...	·7836
Class E—Living on margin of subsistence ...	·10917
Class F—Living below the margin of subsistence ...	88·0858

Proceeding on the basis of average national income per head we saw that it was just enough to feed all the people provided they consented to go naked, live out of doors all the year round and wanted nothing else but food and that also of the coarsest kind. That conclusion was considered to be hypothetical and not true to the actual conditions of life. An analysis of the actual distribution of this national dividend between the various classes of population was considered to be more desirable and instructive for the purposes of this enquiry. Proceeding on this basis we find almost the same story repeated. The first four classes—A to D—forming about 2 per cent of the entire population can afford to live, with families, a life approximating to comfort, a microscopic proportion, being in a position to enjoy luxuries of life. 10 per cent of the population can live on margin of subsistence and can afford to have 'necessaries' of life provided they have no families to support. The rest of the population about 88 per cent cannot

afford even to have 'necessaries' for existence for themselves, maintaining of families being out of the question.

Consider then a huge 'scrap-heap' of humanity living a life of abject poverty and starvation and talking of the great ideal of Plain Living and High Thinking. The only philosophy they can possibly appreciate is the 'philosophy of misery and the misery of philosophy.' Rightly has Marshall observed that a man who is destitute of material wealth cannot become the noble being he might be; he cannot be, if we may say so, what God intended him to be.

So far we have proceeded on the basis of national dividend and the distribution of this national dividend amongst the various classes of society, in terms of money. But 'human dividend' is more important than this superficial national dividend. And that 'human dividend' in the words of Holison consists of "the amount of vital or organic welfare conveyed in the producing or consuming processes for which this concrete income stands." It means in other words that no examination of the Economic welfare of a people is complete unless account is taken of what they actually produce and the conditions under which they produce and the quantity as well as quality of things they consume. This will mean a further examination of the major classes of the population on the basis of their actual income, expenditure and standard of living. We have selected for this purpose the agricultural class and the Industrial working class and the two combined will comprise about 80 per cent of the entire population and nearly the whole of what we have termed as class F. A glance at their actual standard of living will help us to confirm or reject the conclusions at which we have arrived so far.

The standard of living of the agricultural class can best be judged by taking a family cultivating a representative holding and ascertaining the quantity and quality of what they eat and how they live. It is difficult to discuss the conditions of the agriculturists in the different provinces within the space of a few pages. We, therefore, take a representative holding in Bengal and see

how the agriculturist actually lives. And conditions will be found more or less the same, for small land-holders, all over the country.

A scale of dietary of an average agricultural family consisting of 5·15 members and cultivating a farm of 5·21 acres has been worked out by Mr. Momin in his Settlement Report of the Jessore District, Bengal and he has compared it with the estimate of diet given to prisoners in Jail.

Mr. Momin's estimate.			Estimate according to Jail Rations.		
		Rs. a. p.			Rs. a. p.
Rice	...	147 2 0			123 0 0
Salt	...	3 8 0			3 8 0
Dal, Fish and Vegetables		24 0 0			48 4 0
Spices	...	5 0 0			2 11 0
Oil	...	12 0 0			21 6 0
Gur	...	6 0 0			3 14 0
Antiscerbutics	...	0 0 0			1 0 0
		<hr/>			<hr/>
		197 10 0			203 1 0
		<hr/>			<hr/>

These figures speak for themselves. According to this estimate the food required for four prisoners will be sufficient to maintain 5·15 members of an average agricultural family in Bengal.

The Bengal Provincial Enquiry Committee, however, do not agree with this conclusion of Mr. Momin and try to show that an average family consisting of 5·15 members cultivating a farm of 5·21 acres get better food than that indicated by Mr. Momin and further save annually, after meeting their necessary expenses, Rs. 30 or Rs. 6 per head. The average crop value is estimated at

Rs. 2,438 millions and it is divided by the number of families. This gives Rs. 79 per head or Rs. 406 per family. To this are added another Rs. 44 as the average income of the family from subsidiary occupations. The total income is thus Rs. 450 per family and the expenditure has been estimated at Rs. 420 a year, leaving a balance of Rs. 30. The detail of the expenditure is given below :—

COST OF CULTIVATION

				Rs. a. p.
Implements	...	...	...	3 10 0
Cattle	...	...	...	12 0 0
Seed	...	...	...	13 0 0
Manure	...	...	...	0 0 0
Labour	...	...	...	40 8 0
				<hr/>
				69 2 0
Rents, Cesses and Rates	...	...	...	28 6 0
Food	...	...	...	225 0 0
Clothing	...	...	...	35 0 0
				<hr/>
				288 6 0

MISCELLANEOUS

Lighting	...	...	...	5 12 0
Tobacco and Betel	...	...	...	7 12 0
Repairs and Renewals	...	...	...	12 0 0
Social and religious ceremonies	...	...	...	15 0 0
Miscellaneous including education, amusements, entertainments of relatives and visitors	...	...	...	22 0 0
				<hr/>
Grand Total				420 0 0

Let us now examine the proposition whether there really remains a surplus of Rs. 30 with an agricultural family after meeting the necessary expenditure. The agricultural indebtedness of Bengal has been estimated to be Rs. 100 crores, but no provision has been made in the expenditure of an agricultural family for interest on debts. The examples cited by the Committee show that the rates of interest charged by private individuals in some cases are as high as 470 per cent. But the organised loan offices in Bengal accept deposits generally at rates fluctuating between 15 to 20 per cent. A particular loan office in the district of Mymensingh was anxious to have a deposit of Rs. 10,000 at 24 per cent per annum. Evidently then to have a margin of profit the rate that they should be charging to their borrowers must be much higher than what they pay to their creditors. It will not be too much to assume, in the face of these figures, a flat rate of 25 per cent paid by the agriculturists on their loans. According to this figure the payment of interest alone by the cultivators on their debts would be a serious drain amounting to Rs. 25 crores per annum. It is really astonishing to see that no provision should have been made by the Committee on this head while assessing the expenditure of an ordinary family.

Again no provision has been made for bedding and household necessities. Even with the poorest cultivator some household utensils are a necessity. He must also incur some expenditure on barber, washing, etc., and nearly all, in case of sickness, must spend something on medical treatment. No account has been taken of all these things in the items of expenditure of an agricultural family.

In the face of all these facts one can hardly see his way to agree with the finding of the Committee that there is really a surplus of Rs. 30 per annum per family.

Another significant sentence in the Report about the standard of living of the peasants of Bengal needs examination. "The standard of living of the Bengal peasant has been steadily on the rise. Within the last two generations a remarkable advance has

been made. They now wear more numerous and more expensive articles of attire than their grand-parents did half a century ago. Attention is now directed to sanitation, education of children and medical treatment, on which more money is being spent every year. Luxuries have increased to a considerable extent by their introduction into villages by the improved means of communication. Cigarettes have to a large extent replaced the cheap indigenous tobacco which used to be smoked before. *It cannot be said however that the peasants now eat much better for the same improvements in the means of transport have caused the good things produced in the villages to be forwarded to the more prosperous localities such as cities for sale.*"—A very fantastic idea, indeed, of the standard of living.

An improvement which is achieved by substituting 'luxuries' for 'necessaries' of life cannot be a remarkable advance in the standard of living. An increase in the consumption of intoxicating drugs and harmful luxuries will be but a poor index of the growth of prosperity. The real criteria of an advanced standard of living will be better food, better and hygienic houses, better clothes, cleaner surroundings and a material appreciation of all that goes to build healthier bodies, enrich personality, stimulate the mind and release capacity. That an average cultivator does not get better food than he used to about a hundred years ago is a fact which has been admitted by the Committee. Wherein, then, does the improvement in the standard of living lie? Surely, not in the substitution of cigarettes by indigenous tobacco. More money, spent on medical treatment and sanitation, would surely be a very good index of improvement in the standard of living but in the expenditure of an ordinary family as assessed by the Committee there appears to be no such item of expenditure. And the neglect of sanitation is often evidenced by heaps of sewage and the absence of latrines which enhance the general pollution of air. Houses are built without plinths. There are no windows or other adequate arrangements for ventilation. To restrict further the entrance of light and air, in order to observe complete privacy, kerosene tins

and gunny bags are used as screens "In dwellings such as these human beings are born, live and die."

One feels constrained to remark that these are not the signs of real improvement in the prosperity of the average cultivator and agree with Mr. Momin that his standard of living is decidedly inferior to that of the prisoners in Jail.

The condition of the Industrial worker, in spite of the amenities of town life, is in no way better than that of the peasant. His earnings are too small to enable him to have even the necessaries for existence. A good well-ventilated room with sufficient light is a rare thing for him. He often lives and passes away his nights in the open and works in the factory during the day time.

The scales of wages mentioned by the Royal Commission on Indian Labour are between Rs. 10 to Rs. 25 per month for the unskilled worker, Rs. 30 to Rs. 35 for the skilled worker and about Rs. 50 for the highly skilled worker. A majority of the workers fall within the 1st and 2nd categories. The highly skilled workers are very few. "In the United Provinces investigations made for us in Cawnpore, Lucknow and Gorakhpore each show that the great majority of families receive not more than Rs. 30 per month. The level is probably higher in Cawnpore than in other centres, but even here we doubt if, among the rank and file of industrial workers, the average earnings exceed Rs. 25 per month. Except in the coal-fields, the family earnings of workers in organised Industry in Bengal and Bihar and Orissa exceed Rs. 30 on the average and in the more important centres in the Punjab are distinctly over Rs. 35" (Royal Commission on Indian Labour).

An idea of the apportionment of this income in the various channels of expenditure can be had from the following table which has been worked out from the figures supplied by the Bombay Labour Office and which relate to the families of workers at Sholapur and Ahmedabad. In the Sholapur enquiry the average number of people in the family excluding the absentees is 4.57 persons. In the Ahmedabad enquiry the corresponding number is

387. We have, for our purposes, assumed the number in a family to be four and worked out the following expenditure per head in the important items.

	Sholapur expenditure per head per month.	Ahmedabad expenditure per head per month.	Average expenditure per head per month.
Food ...	4 10 6	5 11 2	5 2 10
House-rent	0 10 0	1 2 6	0 14 3
Clothing ...	1 1 11	0 14 10	1 0 4

The expenditure on payment of interest on debts, tobacco, liquor, etc., has been omitted.

An average expenditure of Rs. 5-2-10 on food per month cannot be enough even to maintain body and soul together and is evidently much less than the money spent on prisoners' ration per head per month. The following table prepared by the Bombay Labour Office, comparing the daily consumption of cereals and other articles of food per adult male in lbs. and the Jail allowance, will bear out this statement. It is based on the budgets of 2,473 working class families.

Articles.	Family budgets lbs.	Bombay Jails.	
		Hard labour lbs.	Light labour lbs.
Cereals	... 1.29	1.50	1.38
Pulses	... .09	.27	.21
Beef and Mutton	... .03	.04	.04
Salt	... .04	.03	.03
Oils	... .02	.03	.03
Others	... .07	...	...
Total		1.87	1.69

These figures speak for themselves. It is needless to emphasise the poverty they disclose.

Further it is hardly conceivable that a labourer with an average expenditure of Rs. 0-14-3 can be able to get enough of space even to sleep at night leaving aside the question of a well-ventilated and comfortable room. In Bombay, according to the estimates of Dr. Gupta, at least 70,000 to 80,000 labourers belonging to the United Provinces and the Punjab have no houses at all. They arrange their board with some friend or relative, keep the belongings in a corner of their room and pass the night away in the open or in the verandah. The few fortunate ones who can afford to pay Rs. 4 to Rs. 7-8-0 per month have a dark, ill-ventilated room and live there with a family. In Calcutta the condition of the 'Basties' is inexplicable. The typical unit of this quarter in the words of Dr. Mookerjee consists of a courtyard some 10 feet by 15 feet, surrounded on all sides by thatched huts made of mud. Each hut gives shelter to four or five people—men, women and children, there being only one bed in the family, one tap and one closet for the whole colony. The rent is as high as Rs. 8 per month. Some times Anglo-Indian families of four or five members are living in cells which have been originally built for storing coal, or may have been bath rooms. No wonder then if these conditions lead to physical deterioration and moral laxity. The industrial towns throughout India show a higher death rate over birth rate. Childhood is poisoned at the very source and infant mortality is highest in these surroundings.

An average expenditure of Re. 1-0-4 per head per month cannot be considered sufficient for clothing. Four dhoties and four shirts, two gamchās and two pair of slippers will cost at least Rs. 15 a year. Then soap and washing must entail a further expenditure. Lack of education, ignorance of the laws of hygiene, general inertia and lack of desire to improve his own condition leave the labourer contented with his body enclosed in a crust of dust.

and The study of the standards of living of the agricultural and the Industrial labour classes leads us to the same conclusion at which we arrived on the basis of national income and its distribution amongst the various classes of population. The food that they get is decidedly inferior to the diet given to prisoners in Indian Jails. While the Industrial labourer is generally a homeless worker and of a migratory character, the agricultural worker who possesses a house has his living and being amidst filth, squalor and mud. Those Industrial workers who can afford to have a house live in dens unfit for human habitation. They often leave their wives and children behind in the country and seek relaxation, according to Dr. Gupta, in vice and immorality.

While a common labourer in the 16th century could enjoy necessities and comforts of life comparable to the British standards of living, 88 per cent of the population in the 20th century cannot afford even necessities for existence. For about 2 per cent of the population the 'luxuries' of the past have become the 'necessaries' of to-day but for its major portion even the necessities of to-day have become luxuries of the past. They cannot get better food than they used to get about a hundred years ago. Milk, butter and ghee are almost a luxury for the majority of the population. If we were to choose to feed, clothe, house and provide recreation of the most primitive kind, under the present methods of production, for as many people as possible, then two-thirds of the present population shall have to be displaced.

These are conditions of life which will be a disgrace to any community calling itself civilized. Plain Living and High Thinking which presupposes 'Economic freedom' is not only unattainable under the conditions but is unthinkable. A semi-starving population brought up under constant ravages of poverty and disease must be positively incapable of high thinking.

The old methods of production in the 20th century, when population has increased to such an extent that nature has refused to shower its bounties any further and prices have increased to a greater extent than wages, suit neither the old cultural outlook

of the people nor the new conceptions of standards of living. The salvation of India then lies in assimilating what is best in western culture and Industrialism and adjusting it to the culture of its own people.

A synthesis of cultures is the only remedy.

THE PORTUGUESE BANK NOTE CASE

BY

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As soon as the case of *Banco de Portugal v. Waterlow and Sons, Ltd.*, came up for hearing at the King's Bench Division in England, it became at once clear that the fascinating and intricate problem presented by the case would be of a kind altogether without a precedent. Unquestionably the monetary conundrum was a difficult one even for judges of great commercial experience. Only a fringe of the problem was touched upon in course of the proceedings, but even in regard to that honest differences came to light between the judges, whose varying views may perhaps be outshadowed only by the differences which have already developed among monetary economists themselves. As this case is of more than passing interest and more than mere local application, it is intended in this article to make a statement of the issues involved so far as the economics of the matter goes. It will be clear as we analyse the issues that the case turned upon the validity of notions which lie deep at the very basis of the theory of banking and money.

The facts of the case may be very briefly summarised without going into any legal intricacies. Messrs. Waterlow, an English firm

of printers, held a contract for printing notes for the Bank of Portugal. A gang of international swindlers, of whom one Marang was the chief and active agent, made a fraudulent representation to Messrs. Waterlow as being authorised by the Bank of Portugal to that effect, and succeeded in inducing Messrs. Waterlow to produce notes, in all technical respects genuine and *prima facie* acceptable, to the extent of £3,000,000 worth of escudos. Afterwards by means of a series of clever devices, the gang succeeded in unloading and putting into circulation notes to the amount of over £1,000,000 before the fraud was discovered. The Bank of Portugal took prompt and decisive action. They seized over 363,602 of the 500-escudo notes (which was the only denomination used by the swindlers), and redeemed 209,718 and paid "good" notes of other denominations in exchange; only 6,680 notes remained unaccounted for. The Bank of Portugal recovered an amount of about £488,430 from liquidation of the Bank of Angola and other assets acquired by Marang and his associates. The Bank of Portugal took the next step of suing Messrs. Waterlow for damages in respect of redemption of the forged notes, arising directly as a consequence of the negligence and breach of contract committed by them. Messrs. Waterlow admitted that a breach of contract had been committed, but in regard to damages pleaded that the amount of damages to be allowed should not be more than the mere cost of printing the "good" notes which were exchanged for the "bad" notes, as the Bank, in their view, did not suffer any other loss, the notes being inconvertible paper currency. Here then was the conundrum: should damages be awarded to the extent of the whole market value of the notes redeemed (at the rate of exchange £1=96 escudos), or should they be referred to the cost of printing the "good" notes alone? The case was heard by nine Judges in the King's Bench Division, Court of Appeal, and House of Lords and final judgment was entered by a majority of three to two in the last, admitting the Bank of Portugal's claim to the amount of £610,392, being the net loss suffered by the Bank—the market value of the notes exchanged *plus* the cost of printing the new

“ good ” notes and *minus* the assets recovered from the swindlers. What *had* the Bank actually suffered? That was the gist of the problem and the nine Judges arrived at four different results.

Mr. Hawtrey, in a recent issue of the *Economic Journal* (September 1932), has ably summarised the main events and facts of the case; his conclusions also, coming from a writer of such high authority, must be well worth consideration. Mr. Hawtrey's support, based on purely economic arguments, must indeed be invaluable as proof of acceptability of the majority judgments of the Court of Appeal and the House of Lords. In the circumstances, one would have supposed that the legal and the economic opinion were at last reconciled and nothing further could be said. But as another high authority on central banking has, in a special monograph on the subject,¹ thoroughly sifted the evidence, analysed the facts and the theories and arrived at economic conclusions directly opposed to those of Mr. Hawtrey and of the House of Lords, it would be idle to pretend that the last has been heard of the controversy. Truth can be many-sided, but it must be single in itself. Despite careful clarification of issues, much depends on the interpretation of facts, and as not all the facts of the case (e.g., evidence as to the monetary and exchange policy of the Bank of Portugal) are clear, there is bound to be considerable ground still for real differences of opinion.

In attacking the problem under discussion, we can narrow down the issue to its strictest limits by excluding from consideration the purely legal aspects of the case, such as, whether Messrs. Waterlow committed a breach of contract and were guilty of negligence; whether the Bank of Portugal too was open to blame for contributory negligence; or whether the Bank of Portugal could have avoided part of the “ loss ” in connection with the exchange of its unused notes for all Vasco da Gama (the forged) notes, by

¹ Sir Cecil H. Kisch: *The Portuguese Bank Note Case*. London, MacMillan, 1932. Pp. ix + 284. 10s. 6d.

applying what was described as the "A-P test" and distinguishing the "good" from the "bad" notes. The whole economics of the problem is concentrated in that part of the case which concerns the exchange of the 209,718 forged 500-escudo notes. Was it a mere exchange of pieces of paper of one kind for pieces of paper of another kind? Or did the transaction involve a damage to the Bank which was equivalent to the face value of the exchanged notes, as the House of Lords decided? And if any such damage occurred, did it "flow in the natural and normal course of events from the breach of contract?"

Almost all the Judges arrived at the conclusion that the Bank had no alternative on discovery of the forgeries but "to do what they in fact did." The action of the Bank in withdrawing the entire Vasco da Gama issue and exchanging good escudo notes for it was undoubtedly reasonable and was in the circumstances, as Mr. Justice Wright remarked, "an inevitable consequence of the falsification and circulation of these spurious notes." On this point, perhaps, all will agree. Again, we may well agree to abandon the issue of the gold convertibility of the escudo notes in the near or remote future as a dead one, for the simple reason that such convertibility was only contingent and that damages could not be referred to it. Any loss under the circumstances was, as Sir Cecil Kisch points out, "dependent on adverse action by the State and capable of being avoided with the goodwill of the State."

That the Portuguese paper currency rested upon a basis of inconvertibility and had done so since 1891 is an undisputed fact. There is nothing to show either in the history of Portuguese currency or in that of the policy of the Bank of Portugal that they had at the relevant period any intention to render their currency convertible at some undefined future date. I am glad that Mr. Hawtrey has denied the truth of the assertion of Mr. Justice Wright that the notes "had behind them the liability of the Bank of Portugal," in any material sense. A majority of the Judges,

who tried the case, naïvely supported the 16th and 17th Reasons from the Case of the Bank of Portugal, which ran thus:

“ Reasons . . . (16) Because the Bank's notes being the currency of the country have the same value in their hands as in those of third parties. (17) Because the true measure of damages is the market value at the material date of the genuine notes which by reason of Messrs. Waterlow's breach of contract and conversion the Bank paid out in exchange for unauthorised Marang notes.”

Mr. Bevan, Counsel for the Bank, had reiterated the same argument everywhere: “ All I intended to tell Your Lordships, and I thought I did, was that we are putting forward no claim, except on the figure representing the market value of the notes. We have never put a claim for loss of business or for being crippled in commercial undertakings or in State undertakings. We have claimed the value of the notes.” And again “ I hand out over a million sterling-worth of Portuguese notes, and I receive no value at all, and the position is exactly the same, so far as the absence of value goes, as if I had stood on the top of the tower of the Cathedral of Lisbon and scattered them to the public. I got nothing for them.” “ Value for goods *not* received ” was the theme-song of the Case for the Bank of Portugal and reminded one of the classical “ pound of flesh.” The question, however, was what did it cost the Bank or Mr. Bevan to scatter those notes from the top of the Cathedral of Lisbon? This question was not tackled satisfactorily by the courts. Mr. Hawtrey also thinks that the “ piece of paper ” argument cannot stand, that the amount of currency was dictated by the public interest, and that “ any encroachment on the assets by which the issue is backed and from which the profits are derived is a dead loss to the issuing authorities.” In the same breath, he declares that the Government, in extending the note issue, was guided by no other motive than the “ public interest.” If the public interest was served by extending the issue and compensating the Bank even temporarily for its losses, the Bank clear-

ly has nothing to complain about. Mr. Hawtrey's "public interest" cannot be served simultaneously by delimitation as well as by extension of the issue. It is also contended by Mr. Hawtrey that it is a mistake to suppose that "a bank of issue necessarily *can* recoup itself for its losses by increasing its issues"; that the gold and other assets are not available to the bank of issue to offset the depreciation of its other assets. This recoupment of losses, we shall have to admit, however, depends upon the size of the inflation permitted to the Bank. If the Bank is allowed to indulge in an inflation large enough to wipe out any losses on account of the depreciation of certain assets, which could not be made good by gains on other assets, the final position of the Bank will be on the right side of things. If the inflation did not go far enough then only this loss on account of depreciation would be of some magnitude. It cannot be said, however, that this latter was the case with the Bank of Portugal. The State; the inexhaustible source of authority for extending the limits of the note-issue, was behind the Bank of Portugal and all the available evidence shows that it did its job in all seriousness.

The majority of the learned Judges assessed damages at the full exchange value of the "good" notes which replaced the Marang notes and in doing so were guided by the legal precedent of the *Volturmo* case. Lord Justice Grear gave the analogy of a cheque; "If my purse containing £5," he said, "is stolen, I do not recoup my loss because I have unused balance in my bank out of which I can draw by cheque another £5. The damage I have suffered is still £5, not merely the 2d. I have to pay for the cheque form." Lord Justice Slesser gave a long list of cases to prove that the face value of the notes must be taken as the true measure of damage; but none of the precedents cited had any application to the case under consideration in which not a private individual, corporation or bank, but a bank of issue itself was claiming damages for loss of paper notes which it had an extended authority to print in large quantities.

The 16th and 17th Reasons of the Bank's Case, by which the Case stands or falls, are based on arguments which no monetary economist, I think, can countenance even for a moment. The "encroachment on profitable issue" argument was slightly better, but as pointed out by Lord Warrington in the House of Lords, the Bank "made no attempt to prove that (except the expense of obtaining the paper and printing notes) they incurred any other loss or damage, directly or indirectly" Lord Grear called this part of the issue, which was encroached upon, "a reserve for their future requirements." The Lord Chancellor called it the "assets of the shareholders." The future requirements would probably never have materialised, as the commercial issue was subject to a maximum limit of 195 million escudos, and when the forgery was discovered the commercial issue amounted to only 64 million escudos, while in the years 1924-25, it averaged at about 110 millions. As to the shareholders' assets, they were not affected at all by the forgery, for, at the time of the discovery there was still a goodly margin for profitable investment, 104 million escudos only having been exchanged for the "bad" notes. Moreover, a further addition was made to the commercial issue immediately afterwards by the Government to the extent 100 million escudos, while another 100 million escudos was authorised in anticipation of the sums to be received from Messrs. Waterlow. Even if the Government had not taken this action, the loss of the Bank was only contingent and imaginary as the unused part only of the commercial issue was impinged upon and this at any rate was not going to bring any profit immediately or in the immediate future.

Sir Cecil Kisch says "As a purely banking process the exploitation of the currency is not within the normal functions of a Central Bank at all and no Central Bank could with any weight or propriety claim that it had suffered loss through being restricted in the discharge of such a function for its own profit" (pp. 218-19). Even supposing, however, that the Bank of Portugal was run

on commercial lines and insisted on having its profit from commercial operations, it cannot, owing to the absence of any established exchange policy, be proved that the Bank was or could have been in a position to issue that quantity of notes on commercial footing. The use of the commercial issue was dependent on the availability of good customers requiring short-term credit for commercial purposes and no evidence was produced showing that the circulation of the forged notes or their exchanged counterparts had reduced the number of commercial bills available to the Bank. From the figures given by him (on p. 256), Sir Cecil Kisch draws the inference that the commercial issue was probably being encroached upon during the entire period 1925—27, that especially in the first half of 1926 the average of the commercial issue “remained at approximately the position that existed when the frauds were detected the average being E. 57 millions as against E. 64 millions at the beginning of December 1925 (p. 256). The inference, however, is not quite conclusive. It appears from the statistics given by Sir Cecil Kisch himself on p. 212, that the commercial issue had similarly stood at a low figure of E. 61 millions in December 1924, prior to the introduction of the Marang notes. It was probably a seasonal drop, which synchronised with the discovery of the unauthorised notes. Any how, if the commercial issue was dependent upon bills and other short-term securities, it is not very clear how redemption of Marang notes affected their availability. No evidence was furnished as to this and, therefore, Sir Cecil Kisch’s surmise must be regarded as only tentative. It seems that the authorities decided to allow the exchange to break loose from its moorings and freely invested in the available short-term securities. Perhaps, in this regard international forces were also partly responsible at the time—the easing exchanges due to the Wall Street speculations and the buoyancy of commercial feeling all over Europe and America. The Bank could get hold of short-term bills in plenty, it seems. Also perhaps the Bank effected at this time, what Sir Cecil Kisch calls, “a new orientation of exchange policy.” However, whether the Bank allowed the exchange

rate to fall in order to facilitate large-scale operations of the commercial kind or whether the exchange rate fell owing to external causes, which had no direct relevance to such an assumed policy, it is not possible to discover. But if the former was the case we may give our unqualified support to the conclusion of Sir Kisch "that the Bank may have been temporarily prejudiced in respect of its commercial circulation, as a result of frauds, in the period following their commission, but that it was able to readjust its situation in a way not open to a Bank maintaining the gold standard owing to the fact that there was no obligation upon it to maintain any particular exchange ratio."

A second line of approach to the question of damages would be along the lines of the Bank of Portugal's monetary and exchange policy, if there was one. If the Bank had been pursuing an inexorable policy of price-control or of exchange-control, it could truly have said that to indulge in a bit of inflation, even though it be by courtesy of the Government, might be detrimental to the execution of such a policy. It does not appear from the facts and statistics or from any evidence furnished by the Bank that the Bank was ever seriously pre-occupied with maintenance of either the exchange or the internal value of the currency at prescribed levels. Mr. Hawtrey, however, makes the bold assertion that "The Portuguese authorities were pursuing an eminently sane and rational monetary policy," and this after having confessed that "It is not easy to formulate the monetary policy of Portugal with precision." Again, although Mr. Hawtrey cannot fathom the precise significance of the exchange fluctuations, he gives the Bank the benefit of the doubt and satisfies himself that the Portuguese were guarding against a "recrudescence of depreciation." He completely gives away his point, however, when he says that there was "no evidence to show that the extension of the issues in 1926 either was intended to allow a further depreciation or actually had that effect." If the extension of the issues had not that effect, there is no reason

for us at all to inquire whether the "serious preoccupation" of the Bank with exchange stability was disturbed by the entire transaction. As a matter of fact, the Bank of Portugal had no "rational" policy at all either of exchange or of price control. Its career since 1891 was one long *Odyssey* of opportunism. The exchanges had fluctuated wildly in the year 1924, from 153 to 101 escudos to the £ being the range of fluctuation; and relative steadiness was achieved in 1925. The surprising fact is that even when the Marang notes were inflating the note circulation, the Portuguese authorities were able to maintain the exchange so steady till the end of the year 1925, and taking into consideration the fact that good notes were exchanged for bad ones and the inflation allowed to be incorporated in the monetary system, pending litigation, it is still surprising that exchanges remained relatively steady right up to the end of 1927. Perhaps, international causes were responsible for this. At any rate, there is nothing to prove that the Bank took any positive measures to carry out a *predetermined* policy of exchange control. This seems to have been not exactly a strong point in the Case for the Bank; otherwise, the Bank might have pressed it upon the Courts. Any inductive reasoning from the stability of the exchanges, during 1925—27, which for aught we know may have been a mere accident, must be undertaken with caution. It is clear as daylight that the Bank of Portugal, under authority of the Portuguese Government, availed itself of the opportunity of freely investing in commercial securities after 1927 and by so doing it derived an increasing, not diminishing, profit year after year. Its dividends rose from 35 per cent in 1924 to 40 per cent in 1927 and to 45 per cent in 1930. The Government also seems to have profited from the entire transaction. In addition to the profits arising from the extended note issues, the Bank was awarded liberal damages by the House of Lords. This, as Lord Russell points out in his dissenting judgment, was something "in the nature of a windfall for the Bank." Sir Cecil Kisch has pursued the career of this windfall through the accounts of the Bank and through the subsequent

revalorisation of its assets by the Portuguese Government prior to the stabilisation of the escudo, and has very ably demonstrated that, in all probability, the windfall finally reappeared in the form of a deduction from the profit of the revalorisation, amounting to £. 68 millions.

The conclusion, therefore, must be that the Courts in England failed to appreciate the full economic significance of the difference between a money-creating institution and a private corporation; that they did not clearly see that the Bank of Portugal could and did modify the value of its currency by getting its commercial and other note issue extended by the Government; that it was not proved that any damage was suffered by the Bank in redeeming the Marang notes, apart from the expense incurred in respect of the printing costs of the paper notes exchanged, which costs were compensated many times over by gains in other directions. The question that remains to be answered is: Was at least economic justice done? The economic parties, as distinct from the legal parties, in the case were Messrs. Waterlow, the Bank, the Portuguese Government and the Portuguese people. It is clear that when Marang and his associates introduced the forged currency in Portugal, the people of that country were deprived of real resources roughly to the extent that the former gained. Real transfers, that is to say, took place between the escudo-holding public and the swindlers. Real transfers may also have taken place between debtors and creditors in Portugal owing to the influence of the increased note issue on the price-level, but those transfers are not of any great relevance here. Now, in so far as the Bank profited by the award of damages and by extension of its note-issuing powers, the Portuguese public remained the losers; because they were the real sufferers and it was they who deserved to be compensated. At the expense, therefore, of the general escudo-holding public, the shareholders of the Bank made a permanent profit which could not have been offset by any partial relief which perhaps was provided by possible remission in taxation by the

Portuguese Government due to its share of the booty. Thus it will be seen that the final judgment did not accord with the economic facts of the case and the award to the Bank, which perhaps was entitled to mental and moral damages for its anxieties and injury to its prestige, was based on a material loss which it never really sustained.

IMPRESSIONS OF THE WORLD MONETARY AND ECONOMIC CONFERENCE

BY

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The World Monetary and Economic Conference which met last summer in London, was an unique event in the history of the world. Never before was a conference of this nature called and never before international action contemplated on such a scale. Sixty-seven nations were invited to the Conference and sixty-four actually participated. Such a representative conference had never assembled before. In the scope of its proposed work and in the authoritative position of its participants this Conference was equally unique. Previous to this two other conferences, dealing with more or less similar problems, had been called by the League of Nations. The Brussels Conference of 1920, however, dealt largely with financial questions and the Geneva Conference of 1927 with economic matters. This Conference was called to consider all aspects of world economy. Moreover, this Conference was composed of representatives of governments, who were authorised to conclude agreements on their behalf, while the earlier Conferences were composed of experts who possessed great individual authority but were unable to bind their governments.

The Conference naturally raised high hopes among the general public all over the world. As the crisis deepened it became more and more evident that action on a worldwide scale was necessary. National action, instead of improving the position, had contributed to its deterioration from the world point of view. A conference of this character, with the authority of so many governments behind it was expected to devise methods by which the depression could be relieved or at least arrested, and to put them into action.

To the general public, therefore, the fact that the Conference actually failed to arrive at any agreements which can be of immediate use, has caused keen disappointment.

However, in well informed quarters hope was tempered with a sense of reality. It would have been a miracle if a complete programme of economic recovery had emerged out of the deliberations of the Conference. The Conference started under promising circumstances. The tariff truce initiated by the government of the U.S.A. was, within a few days of the opening of the Conference, entered into by countries representing 85 per cent of world's foreign trade, thus putting a temporary end to the bitter tariff war which had been a marked feature of the depression. And on the 15th of June, three days after the opening of the Conference, the U.S.A. made a magnanimous gesture of friendliness by accepting a token payment of 10 per cent on the debt instalments due from her debtors and continued to negotiate with countries which had defaulted even in making this token payment. Still at the opening of the Conference the *Economist* wrote, "The difficulties are admittedly great and it cannot be said that beneath the surface there is very great confidence in spite of the high hopes that have been placed in all parts of the world on this historic meeting."¹ The *Statist* in an editorial article published about the same date stated, "The obstacles in the way of the adoption of a concerted plan of recovery cannot be underestimated, nor should those who realise that the Conference probably represents the turning point in the question of international co-operation allow themselves to gloss over the difficulties."²

To begin with the date of the Conference was not happily chosen. The U.S.A., having passed through a severe banking crisis, had just adopted a plan of national economic recovery and could not be expected to fetter down her freedom by agreements with other countries which interfered with her internal economic policy. Some cynics maintained that Mr. Macdonald, having

¹ The *Economist*, Vol. CXVI, p. 1229.

² The *Statist*, Vol. CXXI, p. 951.

gone to the U.S.A. to settle the debt question and having failed, dared not return empty handed and so brought back an early date for the Conference, in order to divert public attention and silence criticism. Then, the problem of settlement of inter-governmental debts was excluded from the agenda of the Conference. The disarmament negotiations, closely connected with economic conditions through their influence on finances of governments, were not making satisfactory progress at Geneva. But more serious than these was the realisation that agreement in an assembly in which such variety of economic doctrine and conflicting national interests were brought together was very difficult of attainment. Those who realised the difficulties, therefore, hoped with discretion. They could not place much faith in the inherent sanity of governments, but entertained some hope that the bitter lessons of previous years might perhaps shake blind devotion to economic dogma and national prejudice. To them the failure of the Conference has caused disappointment, but has not been altogether a surprise.

Though the Conference has failed still, both from the point of view of economic theory and as an experiment in international co-operation, it remains a most instructive study. The conflict between economic orthodoxy and free-thought and the failure of the only available method of international co-operation in the hour of trial are of the utmost significance.

1. The Genesis of the Conference.

The Conference arose directly as a result of the recommendations of the Lausanne Conference. It was the culmination of a number of earlier efforts to deal on an international scale with problems arising out of the depression. In the summer of 1932, when the Lausanne Conference was held, depression in the economic activities of the world had reached an unprecedented level. The average fall of gold prices since 1929 had amounted to 30—35 per cent. The sensitive price indices of different countries, made up of commodities which largely enter into foreign trade, had fallen by 55—60 per cent. Prices of individual commodities had

fallen even by higher percentages. Production in industrial countries had contracted by amounts varying between 25 per cent in the United Kingdom to 55 per cent in the U.S.A. The value of international trade had been reduced to about 35 per cent of the 1929 value. Unemployment had increased to 25 million of workers. The stoppage of international capital movement and the freezing of short-term debts was causing further complications. And in many countries national income had been reduced by 40—50 per cent.³ The problems of a purely economic character, which are reflected in the contraction of economic activity mentioned above, were in themselves difficult of solution, but the position was made still more complicated by the fact that over the purely economic depression was superimposed the financial crisis of the autumn of 1931.

The financial crisis began with a comparatively insignificant incident. In the summer of 1931, a director of the Credit-Anstalt of Vienna asked that in view of the rapidly falling value of investments its assets should be revalued and the balance sheet amended accordingly. The revaluation took place and this important Austrian bank was revealed an insolvent. Sir Arthur Salter graphically describes the effects of this incident on financial circles. He writes, 'A few days later I was in the office of the Governor of the Federal Reserve Bank of New York. He was turning from one telephone to another, speaking now to London and now to Chicago. He said as I entered, "I have been speaking to Montague Norman. The position of Credit-Anstalt is serious, and the consequences may be far-reaching." It was as if in another June seventeen years before, one had been in the Foreign Office of a great European power and been told of the murder of the Archduke at Sarajovo. And the consequences were as rapid and as disproportionate to the immediate cause.'⁴ The Austrian Government was at once involved because it felt that it must come to the aid of an institution on which the industrial life of the

³ *The World Economic Survey*, p. 12.

⁴ *Salter, Recovery*, p. 42.

country very largely depended, and its position was only partially and temporarily relieved by the assistance of the Bank of England.

The Austrian incident had worldwide repercussions. The world's balance of payments, since the beginning of the depression, had been largely settled by renewal of short-term advances which were liable to be called at any moment. The serious situation in Austria created a doubt among the investors if other countries would be able to meet their obligations. Large withdrawals of short-term credit from debtor countries took place and in particular a severe run on Germany started. Mr. Hoover took prompt action in proposing a year's moratorium on war debts and reparation payments. But the run of private bankers who had lent money to Germany still continued. A Prime Ministers' Conference was called in London and the bankers who had made short-term advances came to a 'standstill' agreement to last till February 1932. Great Britain's short-term claims on Germany, therefore, became frozen, but she had to meet her large short-term obligations. The strain on her liquid resources became so great that in spite of her being a creditor country she was forced off the gold standard in September 1931. With the fall of the pound a panic set in. Currency after currency rapidly went off the gold standard. By the time the Lausanne Conference was held the financial system of the world had completely broken down and the gold standard had ceased to work as an international monetary mechanism.

The result of the financial breakdown was a further deterioration of confidence. The prosperity of the post-War years, especially the prosperity of the period 1925—29, was an unnatural prosperity. Though a nominal reversion to the gold standard had taken place still the automatic adjustment of prices and balance of payments which was a feature of the pre-War economy, was not operating. After the War a large number of countries emerged with heavy foreign obligations which they were unable to meet out of their normal balances of merchandise and services. These commitments up to 1929 were paid by borrowing. After the break

of the U.S.A. speculative boom in the autumn of that year foreign lending was suddenly arrested. Further difficulties were added to the meeting of foreign commitments of debtor countries by the curtailment in their economic activities. To some extent, however, the situation was relieved by short-term borrowing. Financial crisis led to the complete destruction of this source of help. But the gap between liabilities and assets on account of foreign payments had to be bridged. The only method of bridging that gap under the existing circumstances was the reduction of imports. This was, therefore, a period of intense economic nationalism marked by the introduction of moratoria on foreign obligations, raising of high tariff walls, quantitative restrictions on imports and exchange control. A vicious circle was established. In order to escape the inevitable consequences of the economic depression and the economic crisis, countries were forced to adopt measures which as inevitably had an adverse effect on trade and industry.

It became more and more clear, therefore, that the only hope of achieving any improvement in the situation was by means of international action covering all aspects of economic life. The Lausanne Conference was primarily held for the settlement of the reparation problem. Many authorities had come to consider the reparation and the War debt payments among the most important contributing causes of the breakdown of world economy. The Conference arrived at a settlement of this question into which it is not necessary to go here, but which relieved the pressure on the balance of payments. In Section IV of the Final Act of the Conference it was decided to set up a Committee 'with the duty of submitting to the Commission of Enquiry on European Union, at its next session proposals as to measures required for the restoration of the countries of Central and Eastern Europe.' This committee later came to be known as the Stresa Conference. The next portion of the Final Act of the Lausanne Conference invited the League of Nations to convoke a conference on monetary and economic questions. The Stresa Conference met and drew up a

report but it was realised that most of the problems could not be dealt with on a regional basis and, therefore, deferred action till the World Monetary and Economic Conference was held.

2. Preparatory Work for the Conference.

The League of Nations took up the suggestion of the Lausanne Conference with enthusiasm and proceeded to prepare for the Conference. The preparatory work falls into three stages,—(1) the League's acceptance of the suggestion of the Lausanne Conference and preliminary organisation work, (2) the drafting of the agenda of the Conference, and (3) the Washington conversations in April and May of 1933 as a result of which it was decided that the Conference be held in June.

Within a week the Council of the League of Nations accepted the suggestion of the Lausanne Conference and appointed an Organising Committee under the chairmanship of Sir John Simon. Acting on the suggestion of the Lausanne Conference it also set up a Commission of Experts for preparing the agenda for the Conference. The Commission of Experts consisted of about thirty members all of whom were considered distinguished authorities by the Governments or international organisations which nominated them. The Commission of Experts met for the first time in November 1932 and after a preliminary discussion, at which fundamental differences of views were brought out, dispersed in a rather gloomy atmosphere to enable experts to consult their respective governments. The Commission met again in January 1933. The attitude of the experts had in the meantime changed. They were able to agree on a document which embodied their recommendations to the Conference.

The proposals were in the form of a draft annotated agenda and formed one of the most important documents of the Conference. In making their recommendations the experts were guided by the fact that they were required to prepare an agenda for a conference which was to decide upon measures for solving the economic and financial difficulties which were responsible for and were prolong-

ing the world crisis. Their proposals were arranged under six heads:—(1) Monetary and credit policy, (2) Prices, (3) Resumption of movement of capital, (4) Restrictions on international trade, (5) Tariff and treaty policy, and (6) Organisation of production and trade.

The central theme of the recommendations under monetary and credit policy was the restoration of the gold standard. With a view to increasing the efficiency of monetary gold certain proposals for economising monetary gold were made, like the reduction of the cover ratio to 25 per cent and greater use of the gold-exchange system. Though the experts clearly stated that they were not prepared to limit the freedom of action of central banks in determining monetary policy still it was pointed out that closer relationship between central banks, so that both national and international considerations may be taken into consideration, was desirable. It was vaguely hinted that the Bank of International Settlements was a new agency which might be of help in coordinating the policy of national central banks but no definite proposals were made.

Under prices the usual suggestions for bringing about an equilibrium between costs and prices were made. On the cost side a reduction in the wages and interest charges was suggested. On the side of prices it was proposed that efforts should be made to raise prices by limitation of production and by following a liberal credit policy. It was also suggested that governments and public bodies should help to increase the demand for goods by following a liberal public works policy, provided their finances were not adversely affected.

For the purpose of encouraging movement of capital, it was suggested that foreign exchange restrictions should be abolished, Standstill agreements, transfer moratoria, and other measures of this nature which destroy the credit of good debtors should be done away with. For the purpose of settlement of long-term debts bondholders' associations should be formed. In particular, capital movement should be resumed on the normal scale and a Monetary

Normalisation Fund on the lines suggested by the Stressa Conference should be started.

The last three sections dealing with trade and production, suggested that restrictions on trade in the form of exchange control, quotas, clearing agreements and other measures of indirect protectionism should be reduced in their intensity, if not altogether abolished. Tariffs should be reduced and commercial relations between countries should be guided by unconditional and unrestricted operation of the most-favoured-nation clause. Under production it was proposed that production of important articles of world trade should be limited and regulated by international agreement among the chief producing countries.

The Commission of Experts having been asked to suggest remedies for an unprecedented situation, which creates grave doubts whether the foundations of the present economic structure are truly laid, thought that they could fulfill their function by repeating economic platitudes. The most outstanding feature of the draft agenda was that it was steeped in orthodox economic doctrine and attempted to patch up the crumbling economic organisation rather than suggest any radical changes. It was not realised that the breakdown of the economic system was due to causes inherent in that system. The economic structure had cracked at every important point. Tinkering with it here and there was hardly the remedy for the situation. The Commission of Experts failed to realise that the most enthusiastic internationalist, if he were asked to administer a country during this period, would have been forced to take very much the same steps as had been taken; and they conveniently forgot that many of them as experts in their own countries had recommended or supported measures which they condemned in the draft annotated agenda. *Laissez-faire* between nation and nation and unrestricted hedonism when faced with the situation that arose after the depression set in, was bound to lead to the measures that were adopted. It was expected that the experts would face this problem and suggest some changes of a fundamental nature. Perhaps many of them did not see the

point, so strong was their faith in the pre-War economic dogmas. Those who did, realised that if these questions were raised unanimous recommendations would be impossible. If these questions were raised, it is possible that the experts had dispersed without any results and the Conference had never been called.

The last stage in the preparatory work of the Conference was a series of bilateral consultations between President Roosevelt and a number of important statesmen. Each consultation ended with a joint statement by the President and the particular statesman with whom he was conferring. The first and the most important of these is the joint statement of Mr. Macdonald and President Roosevelt. It is a diplomatic document which hides the absence of precise meaning behind a smoke-screen of goodwill. But it definitely stated that both governments wished that the Conference be called in June. The Organising Committee took into consideration the suggestion for the holding of the Conference and fixed the date of the Conference for the 12th June.

3. The Conference at Work.

The Conference met in London on 12th June. The first day was spent in formalities of inauguration which included, in addition to the King's opening speech, a speech of welcome by Mr. Macdonald, the President of the Conference, in which he outlined the work on the basis of the agenda prepared by the Commission of Experts. The real business of the Conference began from the 13th June. The first three days were spent in general discussion. Speaker after speaker, on behalf of different delegations, described the difficulties to which the depression had given rise. But as one listened to this tale of woe one was struck by the fact that every speaker was concerned with the woes peculiar to his country. The most notable exception was the speech of Mr. Neville Chamberlain on behalf of the British delegation. He outlined a tentative programme of world recovery. The non-committal attitude of the British Government later, when difficulties arose between America and the European gold block, was therefore,

ORGANISATION CHART OF THE WORLD MONETARY

&

ECONOMIC CONFERENCE

PLENARY CONFERENCE

President

Mr. Ramsay Macdonald [United Kingdom]

Vice-President

M. Paul Hymans [Belgium]

Secretary General

M. Joseph Avenal

ECONOMIC COMMISSION

Chairman :— M. Collin [Netherlands]

Rapporteur :— Mr. Walter Runciman [United Kingdom]

Sub-Commission I
Commercial Policy*Sub-Commission II* Coordination of Production and Marketing*Sub-Commission III A.* Subsidies and Merchant Shipping*Sub-Commission III B.* Indirect Protectionism

MONETARY AND FINANCIAL COMMISSION

Chairman :— Mr. Cox [U.S.A.]

Rapporteur :— M. Bonnet [France]

First Sub-Commission
Immediate Measures for Financial Reconstruction*Second Sub-Commission*
Permanent Measures for Re-establishment of International Monetary Standard*Subjects Assigned :—*
Normalisation of Trade, Provision of Foreign Exchange for Imports, Gradual Removal of import duties, Quotas etc., Problems of Tariff and Treaty Policy, Operations of most-favoured-nation clause*Subjects Assigned :—*
Control of production, Marketing Restriction, Bonuses direct and indirect subsidies in particular to Shipping, Export Bounties*Subjects Assigned :—*
Veterinary and Phyto-Pathological Questions, Marks of Origin*Subjects Assigned :—*
Credit policy, Price Levels, Limitations of Currency Fluctuations, Exchange Control and Resumption of International lending*Subjects Assigned :—*
Establishment of International Gold Standard, Functions of Central Banks, Coordination of Central Bank Policy, Monetary Reserves, Silver*Sub-Committees*

Coffee

Sugar

Wine

Timber

Coal

Tin

Diary Produce

Sub-Committee I

Silver

Special Committee of Large Producers and Holders of Large stocks of Silver

Sub-Committee II

Technical Monetary Question.

all the more surprising. On 16th June the Conference divided into two Commissions, one dealing with economic problems and the other dealing with financial and monetary questions. These Commissions later set up sub-commissions and committees to which portions of the task entrusted to each Commission were allocated. As the number of these subordinate bodies was large the more important of them are shown on the attached chart. The chart also shows the general plan of the organisation of the Conference and the relation of different bodies set up by the Conference to each other, with the work assigned to each.

To the Economic Commission was entrusted the question of (1) commercial policy including return to normal conditions of trade, gradual abolition of restrictions on the exchange of goods, foreign-exchange control and tariff and treaty policy including the regime of the most-favoured-nation clause; (2) co-ordination of production and marketing including the regulation of the production of important foodstuffs and raw materials and industrial and agricultural agreements; (3) restrictions to Trade arising out of measures other than customs duties and prohibitions, including veterinary and phyto-pathological measures, marks of origin and other measures of indirect protectionism, and direct and indirect bounties in particular shipping and agricultural subsidies; (4) public works. The Economic Commission postponed the discussion of public works and set up four sub-commissions to deal with the first three heads. The first two subjects, commercial policy and coordination of production and marketing, were each assigned to one sub-commission but the third item was split up into two, the problem of subsidies being assigned to Sub-Commission IIIA and all other measures of indirect protectionism to Sub-Commission IIIB. Sub-Commission II on coordination of production and marketing further set up seven sub-committees on seven articles of world trade. Negotiations on the restriction of the production of wheat were carried on side by side but did not fall strictly within this scheme as they were begun before the Conference started.

To the Monetary and Financial Commission was entrusted the consideration of all monetary and financial questions. This Commission divided into two sub-commissions, the first dealing with immediate measures for financial reconstruction and the second on permanent measures for the re-establishment of an international monetary standard. To Sub-Commission I on immediate measures were assigned questions of credit policy, price levels, limitation of monetary fluctuations, exchange control, indebtedness, and resumption of international lending. To Sub-Commission II on permanent measures were assigned functions of central banks, coordination of their policies, gold-exchange standard and other measures of economising gold, distribution of monetary reserves and silver. Sub-Commission II further divided into two Sub-Committees, one on silver and the other on technical monetary questions. The Sub-Committee on silver set up a special committee of representatives of countries interested in silver for the purpose of working out an agreement on measures for raising the price of silver.

The Commissions began their work with general discussions on different items assigned to them and took into consideration any specific proposals in the form of resolutions brought forward by any delegation, before assigning the subject to the proper sub-commission for detailed consideration. However, difficulties began to arise early. The European gold block maintained that no negotiations with a practical end in view were possible until the dollar was stabilised. As early as 19th June the *Times* wrote that 'the Economic Conference will meet today under the shadow of the reported unwillingness of President Roosevelt to meet the conditions of a plan of temporary stabilisation.'⁵ In view of this background of difference of opinion from the beginning, the work of the different bodies lacked earnestness. One felt that from the beginning the bodies set up by the Conference were marking time in the hope that the dollar difficulty will be solved.

⁵ The *Times*, 19th June 1933, p. 14.

On 20th June Senator Pittman moved in Sub-Commission II of Monetary and Financial Commission a resolution which covered a large part of the field of work assigned to it. The first two sections of this resolution stated that (a) 'it is in the interest of all concerned that stability in the international monetary field be attained as quickly as possible' and (b) 'that gold should be re-established as the international measure of exchange values.'⁶ These views emanating from an American source gave some reassurance and work of the different bodies proceeded. So far as permanent measures for financial reconstruction were concerned Senator Pittman's resolution formed the basis of discussion throughout. In the subsequent sections of the resolution, he proposed economising the use of monetary gold and reduction of the cover ratio on the lines of the proposals of the draft annotated agenda, and certain proposals for improving the position of silver. In Sub-Commission I on immediate measures the most important resolution discussed was on credit policy and price levels moved by Mr. Neville Chamberlain. It suggested that in order to raise prices monetary action was essential, that deflation should cease, that cheap and plentiful capital should be available and its circulation encouraged. The central banks were asked to co-operate in securing these conditions and to pursue open market operations.⁷ On the economic side general discussion lasted longer and discussion of resolution was resumed at a later date. A number of suggestions on different problems were discussed.

However, by the end of June the Conference had reached a critical stage. On the 28th June a meeting of the Bureau, the executive body of the Conference, was called to review the situation, in particular the danger of the breakdown of the Conference, due to the failure of attempts to get the President to agree to the stabilisation of the dollar. As a result proposals of a compromise character, which did not pin the dollar down to a fixed value in

⁶ The Journal of the Conference, p. 66.

⁷ Ibid., p. 70.

terms of gold but limited the range of variation, were made. On the 1st of July President Roosevelt rejected the proposals in a statement which has now become well-known both for its contents as well as its language. In language of great self-assurance the President preached the true economic doctrine to the false prophets of Europe. The language was a grave diplomatic mistake but it was a joy to read the President giving a lesson to European obscurantism. The whole statement is a most interesting document. Its opening paragraph may be quoted as a specimen of the President's tone and economic attitude. He wrote,

'I would regard it a catastrophe amounting to a world tragedy if the great conference of nations, called to bring about a more real and permanent financial stability and a greater prosperity to the masses of all nations, should, in advance of any serious effort to consider these broader problems, allow itself to be diverted by the proposal of a purely artificial and a temporary experiment affecting the monetary exchange of a few countries only. Such action, such diversion, shows a singular lack of proportion and a failure to remember the larger purpose for which the Conference was called together.'⁸

European self-respect was sorely hurt. The delegations of the gold block having been given a lesson, were for leaving the Conference immediately. Certain peace-makers intervened and kept the representatives of the gold countries in London, but from that date the Conference was practically dead.

The Conference lingered on for about a month more. As no improvement in the position took place it was finally adjourned on 27th July. Most of the interval was spent in marking time and towards the end in preparing the reports for the final plenary session. These reports are mostly summaries of discussion rather than a record of agreements reached. Out of the four Sub-Committees set up by the Economic Commission, the reports of the first two merely record general agreement on principles but no agreements on definite proposals were reached. Sub-Commission

⁸ The Times, 4th July 1933, p. 14.

IIIA on bounties and subsidies reported that under the circumstances which had led to the adjournment of the Conference its work could not be usefully pursued. Sub-Commission IIIB was unable to arrive at any agreement on the question of marks of origin and on other methods of indirect protectionism. The question of public works entrusted to this Commission was not discussed at all.

The reports submitted by the Monetary and Financial Commission were equally futile. Sub-Commission I on immediate measures adopted a resolution on indebtedness which merely records what should be done in order to reduce the difficulties arising out of this question and reported that on other questions assigned to it it was unable to make any recommendations. Sub-Commission II on permanent measures recommended that gold should be restored as the international monetary standard and suggested measures on the lines of the draft annotated agenda for economising monetary gold. It also suggested greater cooperation among the central banks and creation of such banks where they did not exist. One definite agreement emerged out of the work of this Commission, the agreement on silver among the chief producers and stockholders of that metal. Thus ended a Conference which unique in its size, importance and the scope of its proposed work, was equally unique in the magnitude of its failure.

4. American Role at the Conference.

The blame for the failure of the Conference has been put on America. Unjustly she has been made responsible for the break-up of the Conference, when she only insisted on keeping before the Conference the true purpose for which it was called. America failed hopelessly in her diplomacy, but her economics was in the main sound. Senator Borah recently said that the Americans had never lost a battle and never won a conference. They can never hope to win a conference so long as they remain such poor diplomats. Being in the right they have permitted their opponents to put them in the wrong. America has enormous prestige and

her delegation by virtue of the position of their country should have been the leaders of the Conference. As a matter of fact they seemed to be of quite secondary importance and even such countries as Italy, Holland and Belgium appeared to exercise greater influence.

In order to understand the position taken up by America in refusing to agree to a stabilisation of the dollar, it is necessary to understand the programme of economic recovery which she had adopted. A brief outline of the chief measures and their significance is, therefore, given here.

President Roosevelt's Government assumed office on 4th March, in the midst of a great financial crisis. The banking system of America had collapsed. On 6th March a national banking holiday had to be declared and stock-exchanges had to be closed. At first the attention of the Government was, therefore, directed towards this problem and the difficulties were tackled in more or less orthodox manner. But soon after steps were taken to initiate a general and daring programme of economic recovery. The first of these measures was the Farm Relief Bill, introduced in the Congress on 18th March. Between that date and June 16, on which date the President signed the National Industrial Recovery Act, the measures adopted passed through three phases. In the first phase emphasis was laid on improving the position of the farmer, the second phase consisted of the suspension of the gold standard on 20th April and the acceptance of the Thomas Amendment to the Farm Relief Bill, giving the President large powers of a reflationary character. Attention under these measures was concentrated on monetary action for raising prices. The third phase consisted of the National Industrial Recovery Act, the dominant feature of which was the regulation of industry with a view to raising wages thus increasing the demand for goods, and initiation of an extensive scheme of public works for relieving unemployment.

The Agricultural Adjustment Act, in which form the Farm Relief Bill ultimately emerged, contains a provision for the supply

of cheap capital to farmers to enable them to convert mortgages carrying a high rate of interest, but its main provision consists of the imposition of a promising tax and using its proceeds for the curtailment of acreage. The average price of farm produce between 1909—14 is taken as the basis and the difference between the basis price and the prevailing price is levied as a tax on the consumer. Payments out of this tax are made to farmers for land they withdraw from cultivation, at different rates per acre for different crops.

This Act also contains the reflationary provisions, the chief of which are that the President has the power to reduce the value of the dollar to any amount up to 50 cents and to accept silver to an amount of 200 million dollars at 50 cents an ounce.

The National Industrial Recovery Act consists of two main sections. One section deals with a comprehensive programme of public works and unemployment relief. Under this section a new organisation, the Federal Emergency Administration of Public Works, is set up to lend money for the construction of new works. The Secretary of the Treasury is empowered to borrow up to 3,300 million dollars for this purpose. The other section deals with the regulation of industry and increasing the purchasing power of the consumer. This part of the Act has attracted most attention. It set up a National Recovery Administration which has proceeded by introducing codes of fair competition in different industries. The provisions of these codes apply generally to wages, hours of work, employment of minors and to general labour conditions. A 'blanket code' was framed by the administration and applied to those industries which were not able to agree to a code. Coercion has not been so far necessary. Reliance has largely been placed on organising public opinion. The Blue Eagle has become a symbol of hope and it is a matter of national honour to show the badge of the National Industrial Recovery Administration.

This brief outline shows that President Roosevelt's Government was prepared to tackle the depression in a far more business-

like manner than had been suggested at the Conference. The President's 'brain trust' was attempting to solve the problem in an unorthodox manner, by raising prices rather than by cutting costs, which appears to be a more desirable method under existing conditions, and they were far more in earnest. Under these conditions it would have been a mistake if America had consented to get her hands tied by agreeing to some patching up of a system that had largely broken down. The more desirable solution of the difficulty was for Europe to fall in line with the American attitude, and to follow a more or less comparable programme rather than to prevent America from going her way.

5. Why the Conference failed ?

The fundamental causes of the failure of the Conference were the conflict of economic doctrine and the sentiment of patriotism and the concept of national sovereignty. It is not clearly understood at present why depressions occur and the relation of variations in the value of money to economic activity has been studied only in recent years. Marshallian analysis which forms the basis of equilibrium economics is worked out on the hypotheses of a stable standard of value. Monetary theory largely confines itself to the study of variations in the value of the standard. The interrelation of these two parts of economics, which is the most important problem from the point of view of causation of depressions has remained, until recently, a neglected study. Under these circumstances the attitude toward economic doctrines and principles to be employed in working out a practical programme of recovery is determined by emotional reactions rather than by scientific conclusions.

The European mind turns back longingly to the era of economic prosperity which came to an end with the War. The chief economic doctrine of that age was laissez-faire; and the gold standard automatically ensured economic justice. In the European mind these doctrines are associated with the memory of prosperous days and there is a deep-rooted belief that by organising

economic life on these principles prosperity can be restored. Emotional attachment blinds European statesmen to the fact that they themselves have found *laissez-faire* unworkable, and the myth of the stability of the value of gold is now completely exploded.

The American programme is based on the realisation of these facts and boldly launches out a scheme of planned economy. It is naturally confined within national limits. In the solution of international aspects of these problems this fundamental difference of attitude was evident. The gold block was for patching up the economic system where necessary, but for maintaining the framework of the existing economic organisation, while the Americans considered these measures too trivial to engage the attention of the Conference. They wished that the Conference would come to grips with the fundamental questions. The refusal of the American Government to stabilise the dollar and the insistence of European countries on this measure is merely an instance of a fundamental difference in attitude. The right course to follow in this matter was to adopt a worldwide policy of reflection rather than to insist that America should give up her programme.

The Conference would have really achieved success only if it had succeeded in devising a machinery by which ideas more or less similar to those underlying the American scheme could to some extent be employed in regulating international economy. It was, of course, quite impossible that measures for super-natural control of economic life should have emerged out of the work of the Conference. National sentiment is too strong to allow it. But steps could be taken by which world opinion could be organised and methods of persuasion employed for curbing nationalism. Out of the labours of the Conference should have emerged three international bodies, one dealing with currency, credit and international lending, the other with tariff and treaty policy and other restrictions on trade, and the third with the control of production. These bodies should have been organised in such a way as to create confidence in their advice. Nations should have come to an agree-

ment to consult them before adopting any measures dealing with their respective spheres. Thus the germ of an international advisory economic organisation would have been laid and a beginning made with international planning.

The problems which are facing the world are not such that they can be solved by trivial measures like reduction in tariffs, slightly more generous quotas and some relaxation of exchange control. What is needed is a new attitude. Idealism and courage alone can help—an idealism informed with wisdom and sobered with the sense of reality and courage to put the ideals into practice.

COST OF MILK PRODUCTION AND DISTRIBUTION AT ALLAHABAD ON LARGE SCALE OPERATION

BY

WILMER J. HANSEN, B.Sc., M.Sc.

Introduction.

The purpose of this article is to condense and present the relevant facts brought out in three commercial dairy studies recently made at the Allahabad Agricultural Institute. The original detailed studies have been presented to the Imperial Council of Agricultural Research for publication and cover: (1) cost of milk production; (2) cost of milk distribution; (3) cost of manufacture and sale of pasteurized butter. Only the facts as brought out in the first two papers mentioned will be presented herein.

System of Husbandry.

In briefly outlining the system of dairy husbandry followed at the Allahabad Agricultural Institute, it may be well also to present for comparison a general idea of other systems of husbandry followed in these provinces.

To the best of our knowledge, cows under village conditions in these provinces subsist entirely upon roughages, supplied in the form of grazing, *bhusa*, and dried *karbi*, called in America straw and stover. The latter two are chopped into small particles and mixed with water before feeding to increase the palatability. While no accurate records are available, or at least have not been seen by the writer, there is a current belief that cows kept under these conditions produce on the average between 500 and 1,500 pounds of milk per lactation. The milk under this type of husbandry is disposed of (1) by being fed to the calf; (2) by consumption in the family; (3) by a small amount of local sale; (4) by

manufacturing the surplus into *ghee*. The buttermilk forms an important item of the diet of the *gwalas*' family.

In cities and towns and in close proximity thereto, the foregoing system of husbandry is supplemented by the feeding of grains or concentrates, for the purpose of increasing the milk production. In this type of husbandry both the fodder and concentrates are purchased in the market and not grown by the milk producer in the great majority of cases.

At the Allahabad Agricultural Institute, fodder is grown on the farm whereas concentrates are purchased in the local market. The data herein presented relate to the cost of milk production under large scale dairy farm conditions pertaining at the Institute.

Milk Production of the Herd.

During the year, June 1st, 1932 to May 31st, 1933, during which this study was made, the following average number of animals were in milk and dry:

				Cows.	Buffaloes.
in milk	...	...	...	53	10
dry	...	...	...	24	5

The total amount of milk produced during the period was 255,058 pounds.

Summary of Cost of Milk Production.

Pounds of milk produced	...	...	255,058		
				Rs.	a. p.
Cost of feed	...	...	11,798	5	11 ¹
Cost of labour	...	...	1,580	1	9
Cost of supplies	...	...	308	7	6

¹ On the cost of feed, Rs. 2,296 profit was made by the farm department in growing fodder for the cattle. If allowance is made for fodder on a cost basis, the net over all cost of milk production works out at Rs. 5-14-0 per 100 pounds of milk produced.

COST OF MILK PRODUCTION AT ALLAHABAD

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Cost of repairs	823	3	7
Interest on capital invested at 4%	1,241	7	0
Depreciation on paddocks at 15%	289	14	0
Depreciation on barns, at 2%	...	...	224	0	0
Depreciation on equipment, at 15%	...	...	212	4	0
Depreciation on cattle, at 15%	...	...	2,613	0	0
Depreciation on bull	...	...	39	12	0
Bull, cost of maintenance	...	...	221	15	3
Credits:			19,352	7	0
Manure cattle	Rs.	1262 0 0			
Manure bulls	,,	13 8 0			
			1275	8	0
Total cost of milk production	...	...	18,076	15	0

Average cost per 100 pounds of milk produced—Rs. 7 1 4.

Cost of Milk Distribution.

The cost of distribution of milk at Allahabad was studied in connection with the Allahabad Agricultural Institute Dairy for a full year, June 1st, 1932 to May 31, 1933. The items of cost include two main items: (1) office and general overhead expenses, which included advertising, collection expenses, depreciation on building and equipment, interest on capital invested, office wages, printing of stationery and account books, postage and telegrams; (2) cost of delivery, which included items such as bottle discs, bottle caps, bottle rings, brushes, lubricating oil, fuel, lead, seals, matches, muslin, repairs, soap, cycle repairs, uniforms, washing soda.

The office and overhead expenditure amounted to Rs. 4019-12-3 or Rs. 2-3-6 per 100 pounds of milk sold.

The delivery expenses amounted to Rs. 3698-15-8 or Rs. 2-9-0 per 100 pounds of milk sold.

The total cost of milk distribution amounted to Rs. 4-12-6 per 100 pounds of milk sold.

Summary.

The cost of milk production and distribution at Allahabad as ascertained from the records of the Agricultural Institute Dairy, is as follows for the year ending May 31, 1933.

	Rs.	a.	p.
1. Cost of milk production, per 100 pounds	...	5	14 0*
2. Office and general overhead cost of distribution, per 100 pounds milk	...	2	3 6
3. Cost of delivery, per 100 pounds milk	...	2	9 0
			<hr/>
Total cost, per 100 lbs. milk	...	10	10 6
			<hr/>

* Allowance has been made for profit made by the farm department in the growing of fodder for cattle.

REVIEWS OF BOOKS

A CRITIQUE OF THE GOLD STANDARD, by H. L. Puxley, M.A. (Yale)
Head of the Economics Department, St. John's College, Agra—George
Allen and Unwin, Ltd., pp. 272, price 10s. 6d. (net.)

Written in a lucid style the book attempts to expound the theory of the gold standard. The past, the present and the future of the gold standard are the bases on which this thesis has been arranged. Incidentally the author comments on the inadequacy of the quantity theory of money to explain short-period changes in prices. Due importance is given to the velocity of circulation factor which determines the course of prices. The possibility of stabilising the price-level by means of a managed currency policy is discussed in all its aspects. He winds up his thesis by making a reference to the necessity of managing the international gold standard through central banking co-operation.

Prof. Puxley is an enthusiastic economic champion of gold. The operation of the gold standard in the good old pre-war days is briefly referred to at the outset. After recapitulating the circumstances which led to the adoption of gold as an international standard (*vide* pp. 11—15) the circumstances under which it functioned smoothly are referred to. The central banking management of the gold standard by means of bank rate changes and open market operations is carefully explained. The gold standard broke down evidently under the pressure of international maldistribution of gold. Its break-down brought to the forefront the necessity of maintaining internal price stability at a level conducive towards healthy activity on the part of home producers. The older ideal which was hitherto worshipped (*viz*) the maintaining of stable exchange rates and linking the price-level to movements of world price-level through the machinery of the international gold standard had to be abandoned. The author proposes to retain and make the international gold standard workable under certain conditions so as to achieve all the advantages of a successfully maintained international gold standard organisation (*viz*) increase of foreign trade, stable exchange rates, and an internal price-level which is subject to the influence of the world price-level. It is not however fundamentally difficult to accomplish this so long as the world price-level itself is intelligently controlled by a consortium of the Central Banks.

The philosophy of the orthodox gold standard is intelligently arranged before the reader. The limitations of the Recardian law of the Territorial Distribution of precious metals are outlined. The disappearance of gold currency from active circulation and the growth of bank credit are briefly alluded to. How these circumstances have robbed the gold movements of much of their significance is related in the second chapter. Adequate reference is made to the theory of bank's creation of credit. The efficacy of the open market operations of the C. B. is commented on. It is by virtue of C. B.'s interference with the volume of bank credit that the modern gold standard is made to function smoothly. That the supply of gold standard currency no longer depends on gold movements and the size of the gold holdings of the country is also carefully explained. All this transformation is undoubtedly due to the action of the Central Bank.

The Central Bank's policy of creating and controlling credit and allowing its legal tender currency notes to follow suit forms the subject of Chapter III. The modern C. B. philosophy is being guided not by one single finger post such as exchange rate fluctuations but a host of national statistics have to be employed in the determination of the credit policy of central banks. Modern central banks aim at making the paper currencies issued by them possess stable value although there might be independent changes in the value of gold. Gold is bottled up in central banks or if it enters the tills of private banks its influence is sterilised by central banking action so much so that international gold movements do not at present carry with them the "seeds of their own destruction."

Capital movements do arise on account of changes in bank rates. These can obviate the necessity of making gold movements when the balance of accounts turn against a country. While such used to be the normal situation prior to the war the post-war conditions have brought about a thorough change in the situation. An era of international defaults on the part of debtor countries has made the capitalists of the creditor country refuse to part with their capital even though a high differential in interest rates existed. Loss of confidence has killed the international flow of capital from one country to another. It has made creditor countries like the U. S. A. and France prefer liquid assets to long-term claims. The moment the debtor country fails to secure the needed long-term capital, its economic development gets clogged. But its anxiety to continue the processes of economic development makes it willing to pay high interest rates in short-term money market and secure funds from it. The structure of international finance becomes distorted as a result of this practice. A tumultuous rush to realise and withdraw these short-term credits from the borrowing country makes the financial situation of the debtor country a hopeless one. A default on the part of

the debtor country means the disorganisation of the financial structure of the lending country even. A break-down of short-term lending ensues. The hoarding infection might spread to the creditor countries.

Other types of gold movements arising out of special causes such as the desire to rehabilitate currencies and the desire to retain gold at home in days of international currency depreciation are referred to as evidences which impede the smooth automatic working of the international gold standard. Hence it is erroneous to presume as in the pre-war days, that Central Banks can by bank rate changes hope to bring about adjustments in international balance of accounts on capital account.

A special chapter is devoted to the explanation of the influence of the three evil genii (*viz*) War debts, Reparations and Tariffs, on the disruption of the orthodox gold standard monetary organisation. The unproductive squandering for war-expenses has left a huge debt burden on the shoulders of the borrowing countries. As these unproductive inter-governmental debts do not enhance the productive ability of the debtor no excess exports can naturally flow from them into the hands of the creditor countries. The U. S. A. became a net creditor country in addition to having a net commodity export balance. The debtors of the U. S. A. consequently find it difficult to repay their debt. Not being a ready recipient of goods, nor a mature lending country like the United Kingdom, protectionist America soon began to create difficulties for the debtor nations. But for the greed of the American public to hold foreign investments it would indeed have been much more difficult to repay their debt. Forced to export gold the debtor countries soon found their gold stocks exhausted. Thus the working of the international gold standard became obstructed by the maldistribution of gold arising out of the above process. But 'gold held in excess' by the creditor countries soon became 'a veritable poison.' To prevent the loss of gold and still maintain a gold backing for their currencies the debtor countries are resorting to exchange control, import restrictions, *etc.*, and a whole arsenal of restrictive measures impeding the course of world trade. The creditor country now finds her exports as well as credits endangered by this policy of economic nationalism pursued by the debtor countries. Government control of foreign exchange means the virtual abandonment of the gold standard. International trade, international finance and the international gold standard have all collapsed at one and the same time, placing the entire world almost in an awkward situation.

The financial world finds itself confronted by a dilemma. More countries are departing from the international gold standard as a temporary necessity thus giving support to the monetary revolutionaries who wish to abandon the metallic standard once and for all. The international yardstick-gold does not and cannot function smoothly on account of the

undue influence of certain uncontrollable non-monetary factors on the world price level. According to them a managed paper currency would secure comparatively stable internal prices. But Governments find themselves in an anomalous position. For a number of years they have experienced the virtues of the gold standard. This utility apart from their blind conservatism makes them reluctant to accept the doubtful recipe of non-metallic managed currencies. They aim at resurrecting the managed gold standard and hope to make it workable by their co-ordinated central bank policies. They hope to return to the familiar monetary practices of the gold standard and even aspire to check the long period secular price trends.

Recognising full well the close inter-relationship of all financial systems a common international effort is being roused to cope with the monetary problem. The necessity of an international monetary standard is easily conceded. Present-day attempts are in the direction of securing international C. B. cooperation or inter-governmental cooperation to stabilise and maintain the value of gold. International C. B. cooperation must aim at resurrecting the international gold standard and guarantee to each central bank a stock of gold enough to satisfy the credit requirements of the people. A stable value must be given to gold so that the international yardstick will not have varying values at different times. If the world's gold supply were to co-equally expand along with world's business this problem could be solved successfully. As gold expands at 1.5 per cent ratio annually while business expands at 3 per cent ratio annually there is a deficiency of gold supply as compared with the demand for new monetary gold. The existing maldistribution of gold itself is another minor problem. Present-day legal regulations of Central Bank's cash reserve stand in the way of effective utilisation of the existing gold stock. An international C. B. conference to bring about a uniform reduction of minimum legal reserves would confer a signal advantage. Economies in the use of existing stock of gold such as circulating bank notes instead of gold certificates would lead to a conservation of the gold stock of the world and the threatened bogey of future shortage of gold need not stand as a bugbear in the way of the adoption of the international gold standard. The adoption of a gold bullion standard by all the present-day gold specie standard countries would be another welcome step in the campaign for the economy of gold. Money-hoarding by the private banks in the shape of their 'till money' can be checked. In spite of obvious initial difficulties the policy of international Central Bank cooperation to successfully work a resurrected gold standard ought to be welcomed. Although international credit coordination may be achieved there are still certain obstacles standing in the path of a successful resumption of the gold standard. The breakdown of international lending, tariff

barriers and inability of Central Banks to completely control the domestic currencies are indeed formidable obstacles. Credit control to be effective means that both supply as well as demand factors are completely under the control of the Central Banks. If the Central Banks or Governments can enter both on the demand as well as the supply side the situation of credit can be adequately controlled. The goal of monetary stability can be reached safely and the business activity of the community can after all be stabilised. Now that the armoury of monetary management can be strengthened it can safely be assumed that Central Banks can effectively control the domestic currency situation. The influence of the three evil genii, which contributed towards the breakdown of the gold standard can be scotched. Their malign influence on the international financial and currency situation can be altogether removed. War debts can be scrapped. Tariff barriers can be lowered and be even removed altogether. Reparations, thanks to the Lausanne Conference, have disappeared from the field of economic discussion altogether. The World Central Bank provides an effective platform for international Central Bank cooperation. Apart from acting as C. B. for Central Banks and as a Clearing House for them, the credit operations of the World Central Bank would enable it to control world credit conditions. If it is endowed with the privilege of creating *aureals*—the credit situation of the world can be controlled by it. Armed with an index number of world prices the short period as well as long-period value of gold can be stabilised by it. Heartily supported by the member Central Banks the credit policy of the world central bank can become effective. The world bank can also prevent the recurrence of cyclical credit movements in any one country. A varying discount rate by the world bank would enable it to meet the credit needs of the different countries. The normal flow of international capital can be secured by the wise conducting of open market operations. It can successfully guarantee the flow of capital from the creditor to the debtor country. It can also act as an international investment corporation making capital available at a cheap rate of interest to the loan starved debtor nations. The principles of monetary cooperation can be effectively taught by the World Bank. This would make possible the working of a resurrected gold standard. Once the principles of monetary cooperation are understood a resumption of non-metallic currency and international management of the same can be thought of as a possible measure.

Barring the political difficulties the purely economic difficulties standing in the way of resumption of international gold standard can be successfully overcome by adopting the series of recommendations adumbrated by the author.

By means of a statistical examination he disproves the possibility of managing fiduciary currency standards. Central Banks cannot by virtue

of their credit policies stabilise the values of internal non-metallic currencies. On the plea that internal stability can after all be secured by Central Bank action it cannot be argued that the international gold standard has to be sacrificed. The ability of a Central Bank to control the domestic value of the currency is very limited notwithstanding the increasing number of expedients to strengthen the armoury of monetary management. "The rigidity of the customers' interest rates, the unwillingness of investors to enter the lower grade bond market when business instability is a marked feature, the reluctance of entrepreneurs to increase their borrowings during days of falling prices in spite of reduced interest rates, and the play of intractable non-monetary forces which influence the volume of currency and the price-level" delimit the ability of the Central Bank to attain monetary stability. It is an ideal goal which might or might not be attained by Central Banking action however diversified it might be.

Prof. Puxley has examined every aspect of Central Bank policy with reference to monetary management. He gives an objective presentation of the facts concerning the gold standard. We heartily commend it to the increasing number of university students who wish to understand the case for the retention of the gold standard.

—B. RAMACHANDRA RAU

A RESERVE BANK FOR INDIA, by L. C. Jain, M.A., LL.B., Ph.D.
Published by Messrs. Macmillan & Co., Ltd, pages 132. Price Rs. 1/8.

In this book Dr. Jain deals with the important subject of the Reserve Bank for India which some while ago engrossed public attention in this country. Whereas a large volume of literature on Central Banking is available, books applying the principles of Central Banking to suit the particular conditions of India are few.

The author examines in a detailed manner the proposals that were before the country, so as to bring out clearly the meaning and working of a Reserve Bank. In order to achieve this, he first of all explains the meaning, the functions and the manner of working of a Reserve Bank and then proceeds to consider the need for such a Bank and the conditions necessary to work such a scheme successfully in India. He goes on to analyse the Reserve Bank schemes of 1927 and 1928, pointing out the causes for their failure, and next takes the scheme of 1933 for a detailed examination, suggesting various improvements in the scheme.

A useful Bibliography is given and the Reserve Bank of India Bill, 1933, is added as an appendix.

Since the Reserve Bank Bill has been passed by the Legislative Assembly the practical utility of this book has to some extent passed but it may be of interest to some as affording a historical background to the subject of the Reserve Bank in India.

—B. V. NARAYANA SWAMY

DAVAR ON BUSINESS ORGANIZATION (Third Edition) by S. R. Davar.
Published by Butterworth & Co. (Publishers) Ltd. London., pp. 562.
Price Rs. 8/-

Prof. Davar is the author of several standard books on commercial subjects, viz., 'Elements of Mercantile Law', 'Elements of Company Law' and 'Higher Accounting with Auditing Notes,' etc. His 'Business Organization' is widely read by senior commerce students all over the country, and we think, is a very popular book on the subject.

The present edition is thoroughly revised and enlarged. The author has incorporated the changes brought about by the passing of the English Companies Act of 1929. Our Commercial Law is mostly based on the English Law and precedents, and as our Companies Act is under consideration for revision, the author has made certain useful suggestions as well.

The book is divided into 14 Chapters with 4 Appendices. Chapter II deals with 'combination in business'. The author describes the various forms of business units. While discussing company management in India, he rightly refers to the abuses in the system of managing agencies in this country. The fact is that these firms have now outlived their utility. They did a good deal of spade work in the floatation and financing of earlier enterprises in this land, but now they are accused of so many charges of omission and commission which are at least partially correct. The Tariff Board on Textile Industry (1927) observed that "of the 175 Directors of mills in Bombay there are only 11 who have received practical training, and no less than 4 of these 11, are Directors of one of the most successful mills in Bombay and of that mill only". In the same connection the Central Banking Enquiry Committee have also remarked, "Generally speaking, the managing agents have not given any scope to Indians to hold such positions in the companies they manage as might

have given these Indians an opportunity to have a comprehensive idea both in regard to the technique of production and management of the business". This indicates how ill-equipped our company management is in India! The pity is that there is no mention even of the term 'managing agents' in our Companies Act. It is therefore absolutely essential that the duties and powers of this class should be clearly defined in the revised Act.

Mr. Davar's treatment of 'Cooperation', 'Rings', 'Pools', 'Kertels', and 'Trusts' is very sketchy and scrappy. We hope in the next edition he will improve this portion.

Chapters III & IV treat of office organization of Trading Firms. The author has discussed various forms of wholesale and retail businesses—Multiple shop system, Departmental stores and One price shop, etc.

Chapters on Company Organization and Secretarial Work are very thoroughly detailed, excepting the 'scanning prospectus' which, we think, is not quite helpful even to the commerce students, to say nothing of a lay man. We are of opinion that there is also need of a separate chapter on 'financing of enterprises'.

The usefulness of the book is augmented further by chapters on Industrial Management and Labour Efficiency, Scientific Advertising, Stock Exchanges, Shipping and Marine-Insurance, and Negotiable Instruments, although the last chapter again is very sketchy.

On the whole the book is well written. It covers the syllabuses of the B. Com. Examination of the various Indian Universities and meets the needs of those for whom it is written.

—K. L. GOVIL

TRAVANCORE ADMINISTRATION REPORT for the year 1931-32—by
T. AUSTIN, Dewan pp. 1—262. Published by the Government of
Travancore. 1933.

This is the seventy-sixth Annual Report for the State Administration, and like its predecessor it contains many matters worth special notice by the student of Indian economics. Just when the volume is to hand for review the news in the paper is that Sir Mahomed Habibullah has been appointed Dewan from next January. While it is the province of the soothsayer to prophesy as to whether the change in Dewanship will prove to be for the better or otherwise, it can be confidently stated from the data presented in the Report under review that Mr. Austin

did great service to the Travancore State during his term of office. He reduced expenditure chargeable to revenue by Rs. 20·51 lakhs in 1931-32 as compared with the previous year : there was a deficit of 12·23 lakhs in the previous year while during the year under report there was a small surplus of 0·38 lakhs. Cutting down current expenditure is an ordinary feat, and on this score alone (apart from other grounds), Mr. Austin deserves the grateful thanks of the Travancore Administration.

Twenty-three and four fifths per cent of the total expenditure, namely, Rs. 45·1 lakhs was on education ! This was the highest expenditure borne by the Government on any one Department. It is no wonder that Travancore leads in the matter of mass education. This has had its hundredfold effects on life and launchings in these days of unprecedented depression. In the revival of the working of the Travancore Sugars, Ltd., in the expansion of the operations of the match and paper factories and in the ramification of handloom weaving in all parts of the State, Mr. N. K. Padmanabha Pillai, the Director of Industries, has utilised all the benefits of the experience he gained in his service (short as it was) in the Hyderabad State.

In co-operative work, the effects of mass education are more vividly apparent. Of the 1810 co-operative societies, 320 were of limited liability, 221 were specially working for the benefit of depressed classes, and membership of societies was at 2,24,532 giving an average of 128 members per society. It is indeed doubtful if in any other part of the country the average membership is so high. Women members were 27,187 constituting one woman member for every 7 man member. During the year 27,263 loans were issued aggregating to Rs. 24·56 lakhs out of which 25,349 loans were of less than Rs. fifty each. For the cost of management of the Department, Government contributed only Rs. 59,236 while the societies themselves contributed Rs. 1,67,912. Surely, Travancore is not far from that date when the Co-operative Movement would fully finance the cost of management and thus free the Movement from the hamperings of official red tape.

As before, the Report contains a large number of highly interesting graphs and diagrams elucidating the matter in it. The next Report—this also would be the regime of Mr. Austin—is bound to be still more interesting in regard to the results of policies and programmes set up during the few preceding years.

—S. KESAVA IYENGAR.

AN ECONOMIC SURVEY OF GIJHI VILLAGE IN ROHTAK DISTRICT, PUNJAB; Punjab Village Surveys No. 2; by Lala Raj Narain, M.A., under the supervision of Prof. Brij Narain, M.A., of the Sanathana Dharma College, Lahore; published by the Board of Economic Inquiry, Punjab, 1932; pp. 1—299. Price Rs. four.

This is a further addition to the valuable publications of the Punjab Board of Economic Inquiry. Highly interesting though it is to plough through the innumerable details presented by the Lala, the volume does not admit of easy review: sixteen chapters, each with a large number of tables and graphs are followed by a model questionnaire and a glossary. The volume would have proved useful alike to the academic student and the lay reader if each chapter had been followed by a precis. Also, it would have been in the consistency of things if the historical portion had been distinguished from the present conditions in each chapter. This is not to deprecate the value of the work, but is a mere suggestion by a fellow worker.

The village has, according to the survey, 143 households with a population of 844. The cultivated area of the village is 1414 acres owned by 354 occupants of whom 119 are resident. In 1924-25 (for which year the inquiry was conducted), 37.6 per cent of land was cultivated by tenants, whereas the area cultivated by tenants during 1904-05 was only 30.8 per cent of the total cultivated area. Land revenue incidence on the average per acre was Rs. 2-8-2 in 1816, Rs. 2-10-11 in the year 1840, Rs. 1-2-9 in 1845, Rs. 1-3-6 in 1909 before settlement and Rs. 1-9-11 in the same year after settlement, and in 1925 it was Rs. 1-13-0. For 1924-25, the total land revenue demand for Gijhi Village was Rs. 2200, demands under cesses amounted to Rs. 339-2-8 and occupiers' rates amounted to Rs. 4616-9-0 thus resulting in a gross incidence of Rs. 7155-11-8 or Rs. 3-9-11 per acre on the average.

In the chapter on Indebtedness, great pains have been taken to separate debt transactions of agricultural and non-agricultural families, but the criterion accepted by the inquiry for this distinction has not been made clear in any part of the volume. Indebtedness of the village amounted on 30-6-1925 to Rs. 60,429. While on the purpose of debts, the investigator casually remarks that the debts of non-cultivators for purposes of consumption are higher than those of cultivators. This might have been true in 1925, but one wonders if the tables have not been turned by 1933 on account of the very steep drop in the prices of agricultural produce. The remark by the Lala that cultivators repaid more easily than non-cultivators is also a feature very closely dependent on the price level of agricultural products. Similar is the case with the following sentence: "land hunger on the part of the zamindar is the chief motive in his loan transactions." It would be interesting to apply the barometer and find the pressure of "land hunger" in 1933!

Mortgages since 1907 were 183 in number and the average burden of mortgage debt on an acre was Rs. 328 in 1920-21 and Rs. 270-7-5 in 1924-25. There were 95 redemptions from 1913 to the end of June, 1925. Practically all mortgages are with possession and on 30-6-1925, acres 154·8 of non-resident owners and acres 15·7 of resident owners were mortgaged. Sales of land have been only 30 in number since 1885, the last sale having taken place in 1912-13.

There are chapters on Industry, Price of land, Yields, Rents, Expenses of cultivation and Consumption—each bristling with data collected with great care and caution. The volume should prove of immense value to aspiring economic investigators.

While thus both the investigator and the Board of Economic Inquiry deserve to be congratulated on this work, the reviewer cannot refrain from an expression of disappointment on closing the volume. This is one of the six villages selected by the Board in 1925 and the Survey was published in 1932. The investigator spent about a year in the village itself and about three months more for writing the report. Research for its own sake is indeed an admirable ideal, but any research would prove abortive if unaccompanied by a sense of proportion and of the necessity for correlation and co-ordination. To mark the depth of the sea at every mile between Bristol and New York might technically be within the province of "research," but common sense must show that this investigation would prove of value only if meant for something else deserving study. For one thing villages selected are only six for the whole of the canal irrigated area of the Punjab, for another the period that has elapsed between resolution and materialisation has considerably taken away from the utility on the data. To add, while "nothing that was relevant has been suppressed or withheld," it would amount to negligence of duty if one refrained from pointing out that the very ideal of the Punjab Board of Economic Inquiry in launching these investigations has almost been lost in the anxiety for exhaustive inquiry and absolute accuracy of data collected. A good portion of the running matter is devoted to inferences emanating from the tables, but the tables deal with only one village, and the data are so hopelessly lean that anything like inference thereon would be quite unjustifiable. But this has been done in every chapter. For instance, after elaborately going through the variations in population from 1881 to 1921, the investigator observes: "it is difficult to account for the changes in population." If the investigator had taken up at least ten or twelve villages in different parts of the Rohtak District, examined the figures historically and then tried to infer, it should have been of some value. With regard to the rotation of crops, 54 fields were taken up and crops grown during the previous ten years noted. On this, the investigator observes that the cultivators do not follow

any hard and fast rules in the rotation of crops or the leaving of fallow. Six heavy crops are said to follow one another without a fallow, and the reasons for this are said to be the greed of zamindars, poverty of small tenants and too frequent changes in owners and tenants. In another place it is said that increasing indebtedness is due not to increasing prosperity but to poverty. The time has come for the Board to consider seriously if such conclusions or inferences are worth the trouble when based on affairs of a village with 143 households. Would it not be more reasonable to accelerate the speed of these village surveys, increase number of villages surveyed and then put together the data for all the villages—leaving it for another agency to analyse and co-ordinate as far as possible and reasonable the data of all the villages according to locality, agricultural conditions and so on. A period of fifteen months whole time for surveying a village with 143 households is really too much. Provided the investigator is a trained man, the longest period to cover such a village in the most detailed manner would be three months. If in 1934 the Board should decide to have surveys of fifty villages in all, or between four and six villages in each of the districts of the Punjab, they would probably do well to employ sufficient staff in order to get into their hands the data of the fifty villages within one year at the latest. Then all the data should be put into the hands of an experienced collector who has had the majority of his service in the Punjab, or those of a public spirited qualified zamindar, for the purpose of seeing through the reports and presenting to the general reader a bird's eye view of all the reports or in any other suitable manner to clarify the results of the surveys.

Another point deserving the attention of the Board is that historical treatment in such village surveys is attended by a high percentage of uncertainty of data: so much so that it is doubtful whether it is worthwhile making the attempt at all. Even today village records are very imperfect, and to depend on them for conditions forty or fifty years ago, or to depend on hearsay or vague reports is not scientific procedure. The rural population is as a rule quite unbusinesslike and experience has shown that if we should be able to get at correct data regarding present conditions on the basis of inquiry from the householders, it should be a matter for congratulation, and even such figures should be, as has been done by the investigator in the present case, accepted after the maximum possible amount of scrutiny and verification. Another factor which considerably decreases the value of such inquiries into the past economic conditions is the value of the currency at the concerned quadrenniums and the economic aspects of social relations among the different classes of the community. On these we have no correct information and to present vague data regarding the past without reference to social conditions and the purchasing power of money, might more probably lead to wrong conclusions than

even approximately correct ones. All this is certainly not to take away from the merits of the ideal, but the Board will do well to reconsider the question of giving detailed attention to past economic conditions of each village surveyed. Of course, it might be possible and worthwhile to attempt at such data on one or two special items, but a general plan of devoting more than half the energy and the time for historical treatment must prove futile.

To repeat, the publications of the Board are indeed highly valuable as pioneering work, and the suggestions made here are offered sympathetically and with the best of intentions. In 1925 they had hardly any trained investigators, but by now they have a good band of them, and it is but natural that future publications should prove still more valuable than the previous or present ones.

—S. KESAVA IYENGAR.

FARM ACCOUNTS IN THE PUNJAB—Rural Section Publication No. 26 of the Punjab Board of Economic Inquiry : by Kartab Singh, Asst. Prof. of Agriculture, Lyallpur College : 1932, pp. 1—249 : Price Rs. 2.

This volume is the seventh of the series dealing with farm accounts in the Punjab. The first three dealt with canal irrigated holdings, the fourth with well-irrigation, and the fifth and sixth with the cost of lifting water by the persian wheel. The volume under review contains the results of the observation for the period of one year of twelve farms in ten districts of the Punjab. Of these, holdings in seven districts were under 25 wells. The point that is of supreme interest is the effect of abnormal reduction in the prices of agricultural produce on costs of production. In 1926-27 wheat sold at Rs. 4/8 per maund whereas in 1930-31 the price went down to Re. 1/9 per maund. In this period gur went down from Rs. 5/15 to Rs. 4/2, deshi cotton from Rs. 7/14 to Rs. 4/7 and American cotton from Rs. 9/6 to Rs. 5/9. The heaviest fall was in wheat. The cost of raising to maturity an average crop of wheat by persian wheel fell as follows :—

Year.	Average cost including manual labour			Average cost excluding manual labour		
	Rs.	a.	p.	Rs.	a.	p.
1928-29	48	0	4	32	11	7
1929-30	40	13	1	27	14	4
1930-31	32	10	8	20	11	7

The most important factor in the reduction of costs was the reduction of fodder prices.

A study has also been made of the comparative economics of electric pumping and the persian wheel, and the results are distinctly in favour of the persian wheel.

Mr. M. L. Darling suggested to the author that land revenue should be given separate from water rates so that the proportion of land revenue to gross produce may be worked out. He also suggested that summary of expenses and income of each farm should be given separately. Both these have been duly carried out.

Such investigations, carried out at such a high level of thoroughness, should be of very great value in assessing the incidence of land revenue and the urgency for sliding the tariff level for saving the raiyat from bankruptcy. The methods adopted for observation and collection of data are credit-worthy, and when one closes the volume the feeling that comes uppermost is that the numerous other agricultural colleges in this country have not yet taken example of Lyallpur College. There is very promising man-power indeed in the Punjab which the Imperial Council of Agricultural Research can very profitably utilise in their activities.

—S. KESAVA IYENGAR

CO-OPERATION IN INDIA AND ABROAD, by S. S. Talmaki, B.A., LL.B.,
Hony. Sect.—Provincial Co-operative Institute Bombay, 1931, price
Rs. 3/8.

We owe an unqualified apology to the learned author of this volume for the delay that has occurred in reviewing it. This book is mainly intended to be a guide to the increasing number of students attending the co-operative schools and classes that are being opened in all parts of this country. The A. B. C. of the true spirit of the co-operative movement as manifested both in India and Europe, is fully described in this book. Rao Bahadur Talmaki is an old, tried and veteran co-operator who has a thorough grasp of the co-operative movement. Acting as the guiding spirit of the Bombay Provincial Co-operative Institute he soon realised the need of a suitable handbook covering the entire subject of co-operation in a lucid and careful manner. The history of the co-operative movement, the present difficulties attending it and the future growth of the co-operative movement in its various aspects all claim attention. His personal experience and knowledge of co-operative banking and housing has helped him a good deal in writing this valuable book.

Dividing the book into eight parts the historical, economic and legal aspects of the co-operative movement are dealt with in the three preliminary portions. The remaining five deal with federation of primary societies, finance, organisation, general education, and education for co-operators. In each and every section the history, theory and practice of the movement have been dealt with.

Apart from emphasising the needed facts which would make short-term agricultural co-operative credit movement more successful, the author has pointed out the essentials of success of industrial co-operation, co-operative stores, co-operative housing, co-operative thrift societies, urban co-operative banks and the land mortgage banks.

Reviewing the organisation and administrative aspects of the co-operative movement the learned and experienced author rightly recommends the deofficialising of the movement. Even the work of auditing ought to be entrusted to Provincial Co-operative Institutes. Instead of the Registrar exercising the audit and supervision powers this non-official agency ought to conduct both audit as well as supervision functions. Intelligent control from within rather than from without is the real acme of true self-government. A co-operative commonwealth ought indeed to be based on the principles of a rational interval system of checks and controls. The initial state-spoon feeding and control ought to be abandoned as early as possible. More non-official control and less official supervision ought to be the guiding motto. Non-official control has to be extensive and it has to pervade every aspect of the movement.

Rao Bahadur Talmaki wisely recommends that the International Co-operative Alliance ought to be represented on the Council of the League of Nations. We would like to go further and link the All India Co-operative movement with the International Co-operative Bank which would be started in the near future as an apex organisation looking after the financial aspect of the co-operative credit movement of the different states of the world.

There is an excellent bibliography and a useful index which will enlighten the inquisitive reader. The carefully written chapters make it eminently fit to serve as a text-book for the students of co-operation. Sir Lalubhai Samaldas has written a foreword commending the use of this book and we join hands with him in recommending this valuable monograph to the various co-operative institutes.

—B. RAMACHANDRA RAU.

**REPORT ON CO-OPERATIVE SOCIETIES IN MYSORE—1930-31 -Bangalore
—1932—pp. 50.**

This is the Annual Report of the Registrar surveying the manifold activities of the various co-operative societies during the official year 1930-31— and it contains the Government Review of the movement. The number of societies was on the decline. But more members have joined the same. As consolidation seems to be the watchword there need be no regret at the lack of quantitative progress. As it is, the working capital and deposits are on the increase. Due to the prevalence of terrible economic depression there has been a decline in the number of societies, a fall in the net profits of the movement, and an increase in the percentage of the overdues in the different societies. With more vigilance the lost ground can be easily regained.

Besides co-operative credit societies, house-building societies, stores societies, industrial co-operation societies, depressed classes societies, special co-operative societies, students societies and land mortgage societies affiliated to a land mortgage bank exist in the state of Mysore. Their civic and social activities are on the increase. More non-official agents are getting interested in the working of the co-operative movement. The different state departments (viz.) Revenue, Agriculture, Industries, and Commerce, and Development departments have heartily co-operated with the Co-operative department. The fascinating details of the progress of these co-operative societies are outlined in pages 10 to 43.

It need not be stated that this progress would have been more marked but for the fall in agricultural prices and the depressed economic conditions facing the country and the wider world at large.

—B. RAMACHANDRA RAU

**A SURVEY OF ECONOMIC DEVELOPMENT WITH SPECIAL REFERENCE TO
GREAT BRITAIN, by J. F. Rees. Sir Isaac Pitman & Sons, Ltd.,
London, 1933. pp. 330. Price 7-6-0 net.**

This book is intended to be a 'companion' text-book in the study of Economic History. Those who go through its pages will easily see that it is thoroughly suited for the purpose. It traces Economic development from the earliest times to the present day and this is done within the space of 330 pages and without omitting any important factors. The main features of economic evolution are, where necessary, clearly outlined and the economic history of Great Britain is narrated in greater detail.

The book is divided into four parts. Part I is introductory and is concerned with such topics as the approach to History, Simple Communities, the Mediterranean Civilization and the Origins of British History. Part II discusses the Middle Ages under the heads the Feudal structure, the Manor, the Town, Markets and Fairs, the Organization of Commerce and Industrial Development. Part III is taken up with the Ages of Transition and describes Maritime Discovery, the Revolution in Prices, Agriculture, Industry, Patents of Monopoly, Trade and Commerce, Rivalry with the Dutch and Banking and Credit. Part IV deals with the Industrial Age in which three phases are distinguished. The first phase lasted roughly from 1760 to 1800, the second from 1800 to about the middle of the nineteenth century and the third from the last date to practically the year 1932.

The book will be found to be a most useful work by the students of Economics and we strongly recommend it to them.

—G. D. K.

TIME AND PLACE BY LIONEL W. LYDE AND ALICE GARNETT. Basil Blackwell, Oxford. 1933. pp. 183. Price Rs. 2.

The relationship between History and Geography is well known. History is concerned with *Time* and Geography with *Place*. This little book purports to emphasise the relationship of the one to the other. In it the authors attempt to survey the development of some of the great civilisations of Europe and the Near East, both chronologically as considered by Historians, and regionally, as seen by Geographers. The book contains 12 illustrations and 48 maps. We are sure the book will prove of great benefit to students in schools for whom it is meant.

—K.

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